

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 230.—Vol. X.]

LONDON: SATURDAY, JANUARY 18, 1840.

[PRICE 6D.]

INTERMEDIATE PERIODICAL SALE.
Shares in Consols, Tresavean, East Wheal Crofty, and other valuable Mines in the County of Cornwall.

SHUTTLEWORTH AND SONS are instructed to include in the intermediate sale, appointed to take place at the Mart, on Friday, January 24, at Twelve, ONE TENTH PART OR SHARE in that most productive and profitable COPPER MINE called the CONSOLS; two 1994 parts or shares called TRESAVEAN; all situated within the parish of Gwennap; three 160th parts or shares in the LEVANT, in the parish of St. Just; two 250th parts or shares in the FOWEY CONSOLS, near St. Austell; six 14th parts or shares in the ST. IVES CONSOLS, in the parish of St. Ives; one 18th part or share in the EAST CROFTY, in the parish of Illogan; three 18th parts or shares in DOLCOATH, in the parish of Camborne; four 250th parts or shares in the WHEAL PROVIDENCE, in the parish of Gwennap; four 116th in the SOUTH ROSKEAR; two 179th parts or shares in NORTH ROSKEAR, in the parish of Camborne; and one 250th in the EAST FOOL, in the parish of Illogan; the whole in the county of Cornwall. The above mines are too well known to mine adventurers to require description. The whole are yielding considerable profits to the adventurers, and may safely be considered to present the most secure and eligible investments in this species of property in Great Britain. The sale takes place under peculiar circumstances, which will preclude reservation. Particulars may be had in due time at the Mart; and of Messrs. Shuttleworth and Sons, 24, Foully.

STANNARIES OF CORNWALL.
FERRIS v. THOMAS AND ANOTHER.

WHEREAS the Vice-Warden did, on the 13th day of August last, by consent of the Defendants, Decree (amongst other things), that a SALE be made of the Engines, Machinery, and Materials, upon and belonging to KELLEWERRIS MINE, in the parish of Kea, within the said Stannaries, under the direction of the Registrar of the Court, and that the proceeds of such Sale should be applied by the said Registrar in the manner directed by the decree in the above mentioned cause.

Notice is hereby given, that pursuant to the said Decree, a PUBLIC AUCTION will be held at KELLEWERRIS MINE aforesaid, on Tuesday, the 18th day of February next, and on the following days, until the whole be disposed of, at eleven o'clock in the forenoon of each day, for selling either together, or in Lots, the undermentioned mining machinery, materials, and other effects, viz.:—A Steam-engine, nearly new, 30 inch cylinder, wood beam, with boilers about 14 tons and 40 feet long; 2 water stamp wheels, 24 feet diameter, with 3 lifters, frame, &c. to each; 2 capstans complete; engine shears; flat rod, 12 capstan ropes of 12 inch each; a long set of flat rods, with stands, pulleys, bobs, &c.; whims with sheaves; several sets of launders; a quantity of new and old iron; several pumps; a large connection rod; whim and other ropes; sundry pieces of new and old timber; 2 smith's bellows, 40 inch and 36 inch; 2 anvils; 2 beams, with scales and weights; iron kibbles; 30 lbs and 40 lbs tools, counting-house furniture, &c., &c.

For viewing the same, application may be made at the mine, and for further particulars (if by letter, post-paid) to Mr. Henry Trefusis Smith, solicitor, Devonport, or to Messrs. Simmons, Passingham, and Simmons, solicitors, Truro.

Dated 24th January, 1840.

TO CAPITALISTS, RAILWAY COMPANIES, COAL AND IRON MASTERS, AND OTHERS.

FOREST OF DEAN, GLOUCESTERSHIRE.

DARK HILL ENDEAVOUR LEVEL.

TO BE SOLD, by Private Contract, all that very valuable COLLIERY, galed to the Hill and Trenchard veins of Coal. This colliery is drained by level, and worked without the aid of expensive machinery. It is situated upon the Sidney and Monmouth, and Wye Railway, and adjoining the turnpike-road leading from Coxford to Parkend and the Parton and Lidsay shipping ports upon the Severn. The above work will form an excellent investment for capital, it may be worked to realise upwards of £500 annually, and will be sold at a price worthy the consideration of any party wishing to embark in business. The consumption of coal is increasing daily, so that in all probability the income to be derived will be rather augmented than diminished, and certain it is that its produce will not decrease in price. The proprietor would not object to dispose of a moiety only, if desired, to an active person who could undertake the management of the trade. A plan of the property may be seen, and further information, with descriptive particulars, obtained (by letter, post-paid, or by personal application), either at the offices of H. Fryer, Esq., solicitor, Coleford; or Mr. P. Robinson, land and mineral agent, and surveyor, Hill-house, Little Dean. Descriptive particulars may also be seen at the office of the "Mining Journal," 12, Gough-square, Fleet-street, London.

STEAM-ENGINE AND MINING MATERIALS.—To be

SOLD, by AUCTION, at P. Rhyndu Mine, near Pwllheli, in the county of Carnarvon, on Tuesday, the 21st of January next, at Eleven o'clock, comprising the following articles, nearly new, and in excellent condition:—

1 STEAM-ENGINE, cylinder 30 inches diameter, 8 feet stroke of the piston, with wood work, cast-iron cylinder, boiler, &c.

CAST-IRON PUMPS, viz.:—30 fathoms of 10-inch; 30 ditto of 8 ditto; 37 ditto of 6 ditto.

20 Pair of Rod-Plates, with bolts.

340 Fathoms of Iron Flat-rods, with various pump-rods.

70 Ditto of Main Pump-rods.

70 Flat-rod Pulleys.

6 Horse-whims, with ropes and kibbles.

3 Capstans and shears to ditto.

1 Capstan Rope.

2 Balance Bobs and 3 ditto for Flat-rods, with connections and brasses.

120 Fathoms of Ladders.

100 Ditto of Cast-iron Railroad.

Smith's Tools, including 3 anvils, 2 vices, 2 pair of bellows, Iron Horse, &c. &c.

Sundries in Carpenter's Shop, Office Furniture, and Sundry Materials in Yard.

The agent on the spot will show the materials any day for a week previous to the sale. For further information application may be made to Captain A. Francis, Mold Mines, near Mold, Flintshire.

Dated 3rd Dec., 1839.

BOSSULLIAN MINE. near Grampound.—FOR SALE, by

PRIVATE CONTRACT, a 40-inch CYLINDER, with Cast Iron Bob, Capstan and Rope, Shears, two whims, and one Whim Rope. Application for further particulars must be made (if by letter, post-paid) to Mr. Wm. North, the purchaser, on the mine.—Grampound, January 7.

TO COAL-OWNERS, MINERS, RAILWAY CONTRACTORS, EXCAVATORS, &c.—HALL'S PATENT HYDRAULIC BELT, or

WATER ELEVATOR.—By this simple, efficient, and economical invention, which has many advantages over pumps of every description, water is raised and discharged in a uniform and continuous stream, at any required elevation. The work produced, in proportion to the power applied, is much greater than in the case of the ordinary pump of the best construction. The apparatus is now at work on the premises of Messrs. Evelyn and Neave, Greengate, Salford, where it may be inspected any day, from nine to ten o'clock in the morning, and from three to four in the afternoon; also at Mr. Edward Hall's, Sunny Bank, Ordall-lane, Salford; and at the Tunnel, on the Manchester and Sheffield Railway, at Saltersbrook. A working model can be seen at the King's Arms, King-street, Manchester, where Mr. Hall will give every requisite information.

MOUNTS BAY MINING COMPANY.—At a Meeting of

the Shareholders of this Company, held at the King's Arms, Holborn-bridge, on the 10th day of December last.

Mr. JOSEPH GRAY in the Chair.

It was resolved—that a Call of Five Shillings per share should be made on the shareholders, payable in twenty-one days; such resolution was advertised in the London Gazette, on Tuesday, the 24th December last, and other papers, which period expired on the 8th day of January inst., payable at the British Australasian Bank, Moorgate-street.

At a Meeting of the Shareholders, held on Tuesday, the 18th instant,

Mr. JOSEPH GRAY in the Chair.

It was reported by the Managing Committee, that such Call had not been responded to; and it was also stated by the committee, that unless immediate steps were taken to procure the necessary funds for the working of East Ding-Dong, the mine would probably be lost. It was, therefore, resolved—

1. That the shares should be retained.

2. That a letter should be sent to all the known shareholders.

3. That this meeting be advertised in the Gazette, calling upon the shareholders generally to contribute to the fund necessary to be raised for the preservation of the mine and the prosecution of the works, and in default of the shareholders not complying with such resolution within one month from the date of this advertisement, the shareholders be treated as having for ever forfeited their shares, and relinquished all their interest in the mine, without prejudice to all former claims the company may have against such shareholders in the morning, and from three to four in the afternoon; also at Mr. Edward Hall's, Sunny Bank, Ordall-lane, Salford; and at the Tunnel, on the Manchester and Sheffield Railway, at Saltersbrook. A working model can be seen at the King's Arms, King-street, Manchester, where Mr. Hall will give every requisite information.

JOSEPH GRAY, Chairman.

THE THAMES TUNNEL IS OPEN TO THE PUBLIC

every day (except Sunday), from Nine in the morning until dark. Admit-

tance One Shilling each. Entrance near the Church at Rotherhithe, on the Surrey side of the River. The Tunnel is now upwards of 100 feet in length, brilliantly lighted with Gas, and is completed to within 120 feet from the Ward-walk, Wapping.

By order, J. CHARLES, Clerk to the Company.

Thames Tunnel Office, Wallbrook-buildings, Wapping, &c.

PLYMOUTH, PENTREBACH, AND DUFFRYN IRON COMPANY.

Capital 400,000, in 8000 shares of £50 each.

DIRECTORS.

Henry C. Bingham, Esq. Richard Hill, Esq.

S. Bosanquet (of East Woodhey), Esq. Anthony Hill, Esq.

John Ditch, Esq. John Hallett, Esq.

Charles Frank, Esq. Henry Luard, Esq.

John Nicholl, Esq., M.P.

Managing Director in London—John D. Cox, Esq.

Managing Directors in the Country—Richard Hill, Esq.; Anthony Hill, Esq.

Bankers—Messrs. Bosanquet and Co.

Solicitors—Messrs. Swain, Stevens, and Co.

The Plymouth, Pentrebach, and Duffryn Iron Works, at Merthyr Tydvil, in the county of Glamorgan, are amongst the earliest of the great iron works established in South Wales, and during a period of above fifty years have been the property of and constantly conducted by Messrs. Richard and Anthony Hill, and their late father, on an extensive scale, and with very considerable advantage.

Messrs. Hill being desirous of disposing of these works, have entered into a provisional agreement with the other gentlemen above named, as the directors of a company proposed to be formed to carry on the works, to sell the same for the sum of £327,000, possession being given on the 1st of May next. The value of the works, &c., as estimated by Mr. William Needham, an experienced iron master, employed by these directors, in full and profitable employment, and will, by the 1st of May, be capable of producing annually 25,000 tons of bar-iron, for which there is an ample supply of minerals upon the property, and, judging from their present capabilities, and from past experience, it is calculated that the profit on the purchase-money of £327,000 will be equal to 10 per cent. per annum.

The undertaking is offered to the public as a permanent investment of capital, and as the company will be in receipt of the profits of the works from the 1st of May, a considerable dividend upon the invested capital may be expected at the end of the first year, and regularly afterwards.

Messrs. Hill agree to continue in the management of the works for at least two years from the 1st of May.

The capital requisite to complete the first payment for the works, and to carry on the business, will amount to £200,000, which is to be paid by the shareholders as follows, viz.:—£12 10s per share on allotment, or within fourteen days afterwards; £12 10s per share on the 15th of April next.

The remainder of the capital to be paid as and when the directors shall require it, in calls not exceeding £5 per share at the utmost, and at intervals of six calendar months each.

A prospectus, containing full particulars and copies of Mr. Needham's report, may be had at the offices of Messrs. Swain, Stevens, and Co., Frederick's place, Old Jewry, and 10, Whitehall; and Messrs. Bazendale and Co., 7, Great Winchester-street, and 24, Lincoln's Inn-fields.

Applications for shares must be made on or before the 1st of February, full instructions as to which will be found in the prospectus.

The prospectus, and Mr. Needham's report, may also be had at the following places:—

Messrs. Yates and Cox, Liverpool.

Messrs. T. Edington and Sons, Glasgow.

Messrs. W. and J. Leechman, ditto.

Messrs. Claxson and Duggan, Dublin.

Messrs. Ward, Merriman, and Co., bankers, Marlborough.

Messrs. Jones and Co., solicitors, Brecon.

The Plymouth Iron Works, Merthyr Tydvil.

The Plymouth Wharf, Cardiff.

Mr. W. Steward, Iron Ore Office, Whitehaven.

Messrs. J. W. and G. Whately, solicitors, Birmingham.

Thomas Tuffey Harding, Esq., solicitor, Manchester.

DEVON AND CORNWALL RAILWAY.—At a full Meeting

of the Devon and Cornwall Railway Committee, held in the Council Hall, Truro, on the 8th of January, 1840.

Earl PALMOUTH in the Chair.

Several communications directed to various members of the committee were read, and the sub-committee presented the following

REPORT.

First Report of the Sub-committee, appointed at the Committee Meeting held at

Pearce's Hotel, on the 20th November, 1839.

Your sub-committee have endeavoured, as far as practicable, to obtain such information on the points suggested in your resolutions, as well as such further information respecting it, and employed in the construction of a line of railway through the county, but are not yet in a condition to present it in so complete a form as they could desire.

They have endeavoured to ascertain what prospect there is of a railway communication being completed between the metropolis and Exeter; and they are informed by the directors of the Bristol and Exeter Railway, that it is their fixed determination to bring their line down to Exeter, "at the earliest possible period," and they further observe that while the completion of their line would necessarily influence the construction of one through Cornwall, the latter undertaking must have a considerable influence upon the ultimate success of the former. There does not appear to be any present intention with the directors of the Southampton and South-Western Railway to bring their line further west, although surveys and estimates have been prepared for a line as far as Salisbury, but as yet no bill for this purpose has been introduced. They have also endeavoured to obtain information respecting the survey which has been made for a South Devon Railway, and to ascertain how near the border of this county such railway would pass; they have not yet obtained this information, but Mr. Kendle, the surveyor, having stated that he would be willing to meet any person deputed by this sub-committee, they have authorised the secretary to proceed to Plymouth, in the ensuing week, for the purpose of having an interview with him, as well as the secretary, and any other influential gentlemen interested in that undertaking.

Your sub-committee have not yet succeeded in their efforts to obtain the papers belonging to the former railway company, on which the statements made to Parliament respecting the traffic were founded, but understand they are very voluminous.

Your sub-committee have taken means to ascertain, with as much accuracy as possible, the traffic of the county in its various branches, and have circulated queries respecting it, and employed competent persons to prosecute the inquiry in the several towns and districts of the county. A large quantity of information has already been obtained, but the inquiry is not completed, nor have the materials been arranged or digested.

The manner in which assistance has been rendered to Mr. F. Fox, the agent employed by your sub-committee, by gentlemen resident in the different places which he has visited, and the readiness with which information has been furnished to him and to the sub-committee, have been very gratifying as evidences of the lively interest felt in the important object for which these inquiries are made.

Your sub-committee have received from Captain Moorsom some very valuable communications, containing suggestions and advice of the greatest use to the committee. Captain Moorsom's known ability and experience in railways renders every communication from him important; and the handsome manner in which he has proffered his aid in carrying out the great object of a Devon and Cornwall Railroad, deserves the warmest thanks of the committee.

Your sub-committee feel that the inquiries on which they have entered, will require considerable time; and, if they are to be prosecuted to a satisfactory termination, will demand larger funds than are at present at the disposal of the committee, but until such inquiries have been made, no data can be given on which any committee could recommend this important undertaking to the unhesitating support of the county.

It was then resolved unanimously—

1st.—That this report be adopted, and that the thanks of the committee be presented to the sub-committee, for their great attention to the business intrusted to their care.

2d.—That the attention of the county be immediately called to the latter portion of the report of the sub-committee, and to the importance of raising additional subscriptions; that the list of subscribers be printed and sent to those gentlemen who have not yet subscribed, with a request for their assistance.

3d.—That John Bassett, Esq., be added to the committee, and that Wm. Reynolds, Esq., be added to the sub-committee.

4th.—That the sub-committee be empowered to call the committee together, when they may deem it expedient to do so.

5th.—That the report and resolutions be printed in those newspapers in which the former resolutions appeared.

That the thanks of the committee be presented to Earl Falmouth for his conduct in the chair.

W. H. BOND, Hon. Secretary.

VALE OF NEATH AND SOUTH WALES BREWERY COMPANY.

BOARD OF DIRECTORS.

Joseph Stancomb, Esq. William Brindley, Esq.

John White Little, Esq. William Henry Rickland, Esq.

Joseph Rousier, Esq.

LONDON BANKERS—Messrs. Brewster and Fowler, Brinsford-street.

Capital £100,000, in 2000 shares of £50 each, to be extended to £125,000, by the issue of additional shares at a premium.

The share list will be closed on Saturday, February 15, on which day the shares will be allotted. No shares will be afterwards issued under £5 premium.

The trade is now 400 barrels per week. In order to meet the present demand, it is requisite to increase the trade to 700 barrels per week, which, at the average price of malt and hops, will yield £15 per cent. upon the capital. The progressive extension of the trade to 1000 barrels per week, as contemplated by the directors, will be attended with larger profits.

Applications for shares to be made to the directors, at the "Vale of Neath Brewery," Neath; who will be happy to furnish all additional information to parties desirous of becoming share holders.

January 17.

ON SALE.—SCOTCH AND WELCH PIG IRON.

ANTHRACITEOUS PIG IRON.

RAILS AND RAILWAY IRON OF EVERY DESCRIPTION.

SMITHS AND STAFFORDSHIRE

BEST BOILER PLATES, ANGLE AND RIVET IRON, BAR, BOLT, CABLE, SHEET, HOOP AND ROD IRON, LATHES, PLANING AND SCREWING MACHINES, DRILLS, AND ENGINEERS' TOOLS OF EVERY DESCRIPTION.

STEEL FILES, CIRCULAR AND OTHER SAWS, AND SHEPHERD GOODS IN GENERAL.

ANVILS, VICES, BELLOWS, &c.

HURDLES AND WROUGHT-IRON FALIRADING.

BEST BLASTING POWDER AND PATENT SAFETY FUSE.

Apply to JOSEPH JOHNSON, CANNING CHAMBERS (north side the Custom-house), LIVERPOOL.

Dec. 14, 1839.

THOMAS TURTON AND SONS, STEEL CONVERTERS and

REFINERS, and manufacturers of BEST CAST-STEEL FILES, cut by machinery, SPRING WORKS, SHEPHERD, respectfully inform their friends and the public, that they have appointed Mr. JOSEPH JOHNSON, Canning-chambers, Liverpool, their sole Agent for Liverpool, North and South Wales, Cornwall, &c., &c.

With thanks to friends already received, they solicit a continuance of them; and assure their friends, that they will continue to supply Files, second to none in the kingdom for excellence and durability.

Canning-chambers, North-side, Custom-house, Liverpool, Jan. 18.

LONDON AND BIRMINGHAM RAILWAY.—Notice is

hereby given, that the BOOKS for the REGISTRATION of the TRANSFER of SHARES of this company will be CLOSED from Friday, the 24th of January, to Saturday, the 8th of February, 1840.

By order, R. CREED, Sec.

Office, Euston Station, Jan. 7.

NATIONAL BRAZILIAN MINING ASSOCIATION.

MOCAUBAS AND COCAES.

The shareholders who have subscribed for the new scrip are requested to bring their shares to this office, that the shares upon which the new capital has been paid, in the ratio of one scrip to eight shares, may be stamped and entered.

By order of the board, WILLIAM MARINER, Sec.

20, Throgmorton-street, Jan. 18.

FIFTH REPORT of the LONDON JOINT-STOCK BANK.

—At a General Meeting of the shareholders, held at the banking-house of the company, in Princes-street, Mansion-house, on Saturday, the 11th of January, 1840.

WILLIAM SHADBOLT, Esq., Chairman.

ARCHIBALD HARTIE, Esq., M.P., Deputy-Chairman.

DIRECTORS.

Sir Felix Booth, Bart. John M'Taggart, Esq., M.P.

William Miller Christy, Esq. Sir Francis Paigrove

William Curling, Esq. Thomas Philpotts, Esq.

John Peter Darther, jun., Esq. Joshua Scholefield, Esq., M.P.

George Holgate Foster, Esq. George Scholefield, Esq.

William Grimsby Gore, Esq., M.P. William Shadbolt, Esq.

Archibald Hartie, Esq., M.P. Thomas Stocks, Esq.

John Christopher Lochner, Esq. George Taylor, Esq.

William Mitchell, Esq. William Venables, Esq., Alderman

Ambrose Moore, Esq.

MANAGER—George Poliard, Esq.

SOLICITORS—Messrs. Tilson, Squance, and Tilson.

The following Report was presented:—

Fifth Report of the Directors of the London Joint-Stock Bank, January 11, 1840.

The shareholders are aware that this meeting has been necessarily deferred until the present time, in consequence of the altered period to which the books of the bank are made up, under the resolutions of the general meetings held on the 1st day of June and the 12th day of July last.

The accounts now submitted to the proprietors extend accordingly over a period of six months and forty-one days, being from the 26th of May to the 31st December last, and the directors have the pleasure to add that the alteration, both as it respects simplicity and diminution of labour, has been productive of all the benefit that was anticipated from its adoption.

The directors have great satisfaction in presenting their present balance-sheet for the period referred to, which they feel convinced will receive the approbation of the shareholders.

In addition to the large sum of interest placed during this period to the credit of the customers' current accounts, it will be perceived by the statement of profit and loss that, after providing for the current expenses, allowing for loss by bad debts, and making a rebate of interest on bills discounted and not yet due, there remains a net profit of £15,309 10s. 7d. Out of this sum the directors have transferred £291 8s. 4d. to the "Guarantee Fund," leaving £15,018 11s. 3d. for the payment of a dividend after the rate of 3 per cent. per annum for the whole period of six months and forty-one days on £516,800, the amount of the paid-up capital of the company.

Convinced from the experience which they have now had, that an increase of paid-up capital would extend the influence and promote the prosperity of the bank, the directors have resolved to obtain that increase by the issue of 12,432 shares to the shareholders, in the proportion of two to every five held by them.

Having in view the convenience of the shareholders, and desiring that the additional capital should be brought gradually into the coffers of the bank, the directors have decided that the payment for the shares to be issued shall be made in four instalments of £2 10s. each, on the 15th day of April, the 30th day of May, the 30th day of July, and the 15th day of September next.

The directors have also, after the most deliberate consideration, deemed it advisable that the new shares should be issued at a premium of £1 per share; but when it is considered that the bank has been established little more than three years, and that within that period a reserved fund of upwards of £20,000 has been created out of the profits of the company, in addition to the dividends the proprietors have received, it must be obvious that this low premium does not in the least degree indicate the real value of the shares, and the directors therefore trust that they will be accepted as a handsome bonus; they think it right to add that it is their intention to confine the issue, at this rate, altogether to the shareholders.

Ever since the establishment of the bank the directors have attached great importance to the possession of a large guarantee fund; they have, accordingly, as already mentioned, devoted a considerable proportion of the profits towards its formation; and to accelerate still more its accumulation, they have now determined to add to the premium to be received upon the new shares, as the sooner that fund reaches what the directors may decide to be an adequate amount to be left to its own increase by compound interest, the sooner will the full profits of the bank be available to the proprietors.

The directors who go out of office on this occasion, by virtue of the provisions of the Deed of Settlement, are—John Peter Darther, jun., Esq., John Christopher Lochner, Esq., John M'Taggart, Esq., M.P., George Scholefield, Esq., William Venables, Esq., and Alderman, but they are eligible for re-election, and having given the necessary notice to that effect, now offer themselves to you as candidates.

The dividend will be payable on and after the 20th instant.

The above report having been read to the meeting by the secretary, a dividend for the half-year ending on the 31st of December last, after the rate of 3 per cent. per annum, was declared by the chairman.

Resolved—That the report now read be received, and that it be printed for the use of the shareholders.

The following directors having retired from office by virtue of the provisions of the Deed of Settlement were unanimously re-elected, viz.:—John Peter Darther, jun., Esq., John Christopher Lochner, Esq., John M'Taggart, Esq., M.P., George Scholefield, Esq., William Venables, Esq., and Alderman.

Resolved unanimously—That the cordial thanks of this meeting be presented to the chairman and directors, for the very able manner in which they have conducted the affairs of the bank.

LAW INTELLIGENCE.

GODSTONE STONE QUARRIES.

SURREY QUARTER SESSIONS—JANUARY 7.

WILLIAM STEDALE AND HENRY STEDALE AGAINST THE CATTENHAM POOR RATE.—Mr. MONTAGUE CHAMBERS (with whom was Mr. TAYLOR, for the appellants) stated, that they were rated for the Godstone Fire Stone Quarries, and that they claimed exemption from the rate, on the ground that the works in question were stone mines. The statute of Elizabeth, at the same time that it made coal mines rateable, enacted (by implication) that all other mines should be exempt. Now, the works in question had always been called quarries, and quarries they undoubtedly were, but the question which the court had to decide was, whether or not they were mines, for it was clear that a quarry was a mine or not, according to the mode of working it; if it were worked openly by daylight, it was a mere pit; but if the works were carried on underground by artificial light, and, of course, without disturbing the surface, but leaving pillars to support the superincumbent earth, then it was equally clear that it was a mine. At first sight it would appear to be a task of some difficulty to determine what was or was not a mine. Much difference of opinion once existed whether an excavation, from which metals were not obtained, could be considered a mine. Fortunately, however, that doubt had been removed by the decisions of the Court of Queen's Bench, in several cases, where they decided that the criterion by which to ascertain whether a given excavation be a mine or not, was, not the nature of the material obtained, but the means employed to get it. It was not the substance extracted, but the mode of working, which the court must take as their guide in deciding the question of mine or no mine. The learned counsel cited "Rex v. Sedgely," and "Rex v. Dunsford," supporting that view of the law, from which he assumed the court would be relieved from any difficulty it might have experienced in reference to the substance extracted from the works in question, and would confine itself to the simple question, whether or not the mode of working these quarries was similar to that in which mines were worked at the present day. The freestone (he said) was found in a bed composed of several strata, beneath a large hill; inclined tunnels being driven from the side of the hill, and railroads laid down for about a furlong in length. The work of getting out the stone is then begun, and the mode adopted is precisely similar to that in the Welsh coal mines, with this single exception, that, in these quarries, the work is begun at the top of the bed, so that the blocks of stone may be got without breakage; while, in coal mines, they undermined the layer of coal, and allowed it to fall down, regardless of the size or shape which it should afterwards assume. The present works of the quarries were more than a quarter of a mile from the mouth of the level, and several hundred feet below the surface, and immediately above them were large chalk and lime works, which were rated: of course the work was all performed by candlelight, and by men trained to the art. There was no perpendicular shaft, and none was found necessary, by reason of the purity of the atmosphere in the quarries. The blocks of stone, when separated from the rock, were drawn to surface. The inclination of the "bed" was about one in twelve, and ran for several miles under a ridge of the Surrey Hills. The learned counsel stated, that he should call several workmen to prove the nature of the works, and he would then produce some eminent mining engineers to give their opinion whether the works in question were those of a mine. The gentlemen he alluded to would name to the court several mines which were worked in a similar manner, and if the court were satisfied of that fact, they would then grant the appellants the relief they sought by amending or quashing the rate.

Mr. Grantham (a surveyor of Croydon) produced and deposed to the accuracy of a plan and section of the quarries.

John Hills, aged 70, Stephen Parbury, aged 79, and Thomas Davis (three of the workmen in the quarries) produced the tools used, and confirmed Mr. Chambers' description of the works.

Upon cross-examination by Mr. JEMMETT (for the respondents), they said they had never heard the works called by any other names than quarries.

John Taylor, Esq., deposed that he knew several mines worked by levels and inclined planes, without perpendicular shafts; that, in his opinion, the mode of working these quarries was similar to that of many mines, particularly in Wales and other mountainous districts.

In reply to questions put to the witness from the bench—Did you ever hear of a stone mine? he replied, I cannot say that I did.

Is not this a quarry worked like a mine?—Witness—I would rather avoid saying what the works in question are, for that seems to be the question in dispute; all I can say is, that they are worked as mines.

Parcival N. Johnson, Esq., and R. Thomas, Esq., gave similar testimony. J. Wilks (a Staffordshire miner) stated that he knew the Dudley limestone works, which were formerly worked open cast, but now, by reason of their depth, were worked by miners, and in mining fashion.

Mr. TAYLOR, in a very able speech, proceeded to sum up the evidence, and to remark upon the law upon which the question before the court would have to be decided. With reference, he said, to the question that had been put to the witnesses, whether they had ever heard of a stone mine, it so happened that they had not, but that there were stone mines beyond dispute; the Court of Queen's Bench, in "Rex v. Sedgely," had expressly decided that the limestone quarries, which were the subject matter of that case, were "limestone mines," and in "Rex v. Dunsford," which was the case of a freestone quarry, the court referred a case back to the quarter sessions to inquire whether or not that was a mine, and directed that inquiry should be had with reference to the mode of working, as distinct from the nature of the substance extracted, which formed no part of the question; and the sessions, acting upon those directions, had since twice held that Mr. Dunsford's quarry was a mine.

Mr. HEDGER—What have we to do with what the quarter sessions held in Mr. Dunsford's case?—Mr. TAYLOR—I do not quote the decision of the Wilts Quarter Sessions as an authority by which this court must be guided, but—

Mr. HEDGER (warmly)—Then what have we to do with that?—We will not attend to what has taken place in any court of quarter sessions.—Mr. TAYLOR—I was not quoting the decisions of the quarter sessions, in "Rex v. Dunsford," for the purpose of binding this court to set upon these determinations; but if this court be desirous of arriving at truth, if the question now before the court (and it is a very important one) is to be calmly and dispassionately decided upon its merits, it cannot be quite foreign to the case that, on a recent occasion, two courts of quarter session, in a mining district, have decided that works precisely similar to the present were mines.

Mr. HEDGER—How do you know that?—Mr. TAYLOR—It is so stated in a note to the case in the reports, and I hold in my hand the briefs of counsel on the occasion, indorsed with his hand, "rate quashed—the work in question is a mine."

Mr. HEDGER (with much warmth, and which we regret to have occasion to record, as not being consonant with our ideas of the duties of a magistrate or judge, addressed Mr. Taylor, by saying—Will you go on, Sir?—Mr. TAYLOR—I was proceeding to show the bench that, so far from it being at all impossible that there should be a stone mine, the Court of Queen's Bench, on several occasions, and the Wilts Quarter Sessions, on the occasions I have alluded to, have distinctly recognised their existence; and that, therefore, if this court will act upon the rules which the Judges of the Queen's Bench have laid down for its guidance, it will cease to regard the nature of the material obtained, and direct its attention to the mode of working, which had been minutely detailed by the workmen who had been called, and which had been further distinctly proved by the witnesses. The learned gentleman then quoted several authorities, showing the derivation and application of the word "mine" and "quarry," from which it appeared that a quarry was a mine or not, according to the circumstances of each particular case, and proceeded—I have heard that the respondents intend to urge upon the court that, because there is no perpendicular shaft, it cannot be a mine; then which (I must be pardoned for saying) a more absurd proposition never was conceived. What is the evidence? All the witnesses who have been called have enumerated instances of mines worked by levels and without shafts, and, besides, a shaft is no part of a mine—it is merely a way to the mine; and it is quite immaterial whether that way be perpendicular, or horizontal; in a situation like the present, none but a madman would dream of sinking a shaft, for, besides the enormous expense of so doing, to take the stone up a shaft, to the top of the hill, would be to take it just where it is not wanted, while the mouths of the present levels are close to the high road. Again, he was told that there could be no mine where there was no steam-engine; the answer to that was—mines were in existence long before the invention of the steam-engine, and still longer before it was applied to the machinery of mines. The learned counsel concluded a most eloquent address, by saying to the court—If you conscientiously believe that this work is not a mine—if, after the evidence you have heard, you can conscientiously say that the operations here performed are not those of a mine—then you will be justified in dismissing this appeal; but if you believe the testimony of the very respectable gentlemen whom I have called before you, that the works in question are similar to those of any mine that now does, or ever did exist, then, by the authority of the cases I have cited, you are bound to quash this rate.

Mr. JEMMETT (with whom was Mr. GARELKE, for the respondents) shortly addressed the court, to the effect, that the works in question were quarries—they had always been so styled, and the men called one another quarrymen. None of the witnesses had ventured to swear that they were mines, and it was the duty of the appellants to show that they were. He cited "Rex v. Woodland," upon which

Mr. CHAMBERS claimed to reply that "Rex v. Woodland" was no authority; the works in that case having been open to daylight—in fact, a mere pit. The Court, after the lapse of a few minutes—"The appeal is dismissed; upon the ground that the works in question are not mines, but quarries."

IMPERIAL JOINT-STOCK BANK.

COURT OF EXCHEQUER—JAN. 14.

CROSS AND ANOTHER v. LAW.—In this and five other cases in this list several counsel appeared to show cause against rules which had been obtained by the respective plaintiffs, the purport of which in each was to enter a suggestion on the roll under the statute of 7th George IV., c. 46, s. 13, in order that execution might issue against certain persons, not parties to the record in the causes, but who were alleged to have been shareholders in a certain joint-stock bank, called the Imperial Bank, the failure of which had given rise to numerous actions against nominal defendants, being the registered public officers thereof, against whom verdicts had been recovered, the fruits of which were now sought to be gathered from certain solvent parties, whose names had been returned by the agents of the bank to the Stamp-office as being shareholders or partners in the said bank, but who now, for the greater part, alleged that they had never been concerned in the bank as partners or shareholders, imputing that the whole scheme had been a bubble, in the prosecution of which they had been returned to the Stamp-office, without any interest at all in the matter, and behind their backs. On the part of the plaintiffs in these actions, it was contended that the rules ought to be made absolute, according to the provisions of the statute in question, by which it was enacted that these joint-stock societies should be governed by certain prescribed forms, among which one was a liberty of suing and being sued by a nominal representative, called the registered public officer, whose duty amongst other matters, it was to make returns, upon oath, to the Stamp-office, of the names, &c., of all the shareholders, it being also enacted that these returns should be taken to be *prima facie* evidence of that fact against these parties named therein, while another portion of the Act empowered the creditors of these societies to take out execution against any one who might be proved to have been a shareholder at the time his debt was contracted, his name being entered on the roll by means of a suggestion of that fact by leave of the court in which the action to recover the same had been brought against the public officer.

On the part of these persons so sought to be fixed with the payment of these liabilities of the Imperial Bank, it was urged that the proper way to proceed was by a *scire facias*, and not by a suggestion, which would deprive them, who had not hitherto been in a position to defend the suit, of the power of bringing writs of error, or of questioning the judgment already obtained in any way at all. Besides this, it was thrown out, that as these returns were the only evidence against these parties, it was incumbent on the plaintiffs to show clearly that they had been made in strict accordance with the provisions of the Act, which it was contended was not so in some of the cases.

Messrs. CRESSWELL, RICHARDS, CROMPTON, and other learned gentlemen were heard for the parties opposing the rule, and Messrs. ERLE, COWLING, and CLEARY for the plaintiffs.

The Court at once declined to give any judgment upon the matter without taking time for deliberation, and it being understood that there were several such cases now pending in the other courts, it was intimated that the judgment in one court would bind all the cases in all the courts.

COURT OF EXCHEQUER—JAN. 16.

RAWLINSON v. NUTTALL.—Mr. WATSON moved the court to set aside a writ of *capias ad satisfaciendum*, the arrest made thereunder, and that the money paid by the defendant should be ordered to be paid back to him.—Rule refused.

MANCHESTER AND LEEDS RAILWAY.

VICE-CHANCELLOR'S COURT—JAN. 14.

ILLINGWORTH v. THE COMPANY.—The VICE-CHANCELLOR this morning gave judgment in this case, dissolving, with costs, the injunction which the plaintiff had obtained restraining the defendants from seeking, as was alleged by the plaintiff, to divert the water of the river Calder from flowing to the plaintiff's mill, and from interfering with or obstructing their works, a private road leading from a public road to the plaintiff's mill.

COMMERCIAL STEAM-PACKET COMPANY.

COURT OF COMMON PLEAS—JAN. 14.

GALLOWAY v. BLEADEN.—This was an action against the defendant, as secretary of the above company, for an alleged infringement of the plaintiff's patent for an improved paddle-wheel. The cause was tried in the last Middlesex sittings, when the plaintiff obtained a verdict.

Mr. Serjeant STEPHEN now moved for a rule to arrest the judgment, on the ground that the declaration only alleged that the defendant was the secretary of the Commercial Steam-packet Company, and that the company had infringed the plaintiff's patent; whereas the latter was only empowered to sue and be sued in the name of their registered officer, consequently, the defendants not being alleged to be the company's registered officer, the judgment must be arrested.—The Court granted a rule to show cause.

NORTH MIDLAND RAILWAY.

COURT OF QUEEN'S BENCH—JAN. 14.

THE QUEEN v. THE COMPANY.—In this case, a rule nisi had been obtained for a *mandamus*, commanding the defendants to summon a jury to assess compensation to a person whose property was alleged to have been injured by the company having lowered a level, and thereby caused a stream of water to inundate it.

Mr. M. D. HILL and Mr. CRESSWELL showed cause against the rule, and contended that the alleged injury did not exist.—Mr. JERVIS and Mr. WHITEHURST were heard in support of the rule, which the court made absolute.—Rule absolute.

NORTH UNION RAILWAY COMPANY.

COURT OF QUEEN'S BENCH—JAN. 16.

THE QUEEN v. THE COMPANY.—In this case a rule nisi had been obtained for a *mandamus* to issue, commanding the defendants to summon a jury to inquire into, assess, and give compensation to Joseph Ryland and others, the occupiers of certain lands used by the company, under the authority of their Act of Parliament.—Mr. Cresswell appeared to show cause against the rule, and Sir W. Follett for the plaintiffs.—Rule made absolute conditionally.

THE IMPROVED PATENT OLMSTED AIR STOVE.

We have had great pleasure in inspecting a number of elegant specimens of this stove, the invention of Professor Olmsted, of Yale College, in North America, where they have been most successfully brought into use. So highly has the invention been appreciated in America, that joint-stock companies have been established to extend amongst the general community the comfort and convenience they diffuse wherever applied. They are adapted for the effectual warming with pure air, every kind of building or apartment, from the spacious church to the family parlour. These stoves are also, from the neatness of their construction, highly ornamental. They are of two forms, the double pillar or treble pillar stove, each pillar being circular, a few inches apart from each other, and connected by a small flue or short length of stove pipe. In one of the pillars (which are of polished malleable iron) is the furnace, which is so constructed that all danger of accident from fire is abated, and no ashes can escape. The other pillar, in a double pillar stove, or the other two in a treble one, are "radiators," through a casing or lining, in which the hot air passes from the furnace, and is radiated in all directions; while through a wide aperture or open pipe, forming the interior of the casing, or concentric cylinder, and open to the ground below, as well as above, the cold air in the chamber or building where the stove may be situated, is drawn up, heated in its passage, and finally diffused throughout the apartment. In the treble pillar stove, the centre pillar forms the furnace, and the others "radiators." An even temperature may be kept up, and the consumption of fuel is very small. A constant, equal, and healthy temperature may, without the slightest danger, be kept up by these stoves, even in a sleeping apartment in the night. They may be obtained, of any size, so as to heat small or large rooms or buildings, all that is requisite to determine it, being to supply the number of cubic feet to be warmed. They may be fitted either with ascending or descending flues.—*Gore's Liverpool Advertiser.*

PROSPECTS OF A NEW COUNTY.—MORCAMBE BAY RAILWAY.

By the intended inclosure of Morecambe Bay and the Duddon Sands, 52,000 acres of land will be reclaimed, which will form two of the most beautiful valleys in the lake district, of eighty-three square miles. The sand being composed almost entirely of calcareous matter washed from the surrounding limestone, is capable of being formed into the most fertile soil for agriculture, of which proofs have been fully shown by many able letters which have appeared in the provincial press, written by J. Stockdale, Esq., of Carl. The land proposed to be reclaimed will form an area half the size of Rutlandshire, and, calculating one individual to two acres, will accommodate a population of 26,000, being about half the number of the present population of the counties of Huntingdon and Westmorland, and 5000 more than that of Rutland. It would about equal in population and extent Lonsdale North—a peninsula lying between the two bays (Morecambe and the Duddon), on which stands the ancient ruins of Furness Abbey; and is also a rich agricultural and manufacturing district, abounding with slate, iron, and copper mines. By the reclaimed land being added to Lonsdale North, it would form one of the most pleasant and compact counties in the kingdom.—*Whitehaven Herald.*

MINE ACCIDENT.—On Wednesday last, at one of Earl Fitzwilliam's coal mines, near Greasborough, Samuel Street was seriously injured by the falling of a huge mass of coal, and one of his sons was killed by the same accident.

SPECIFICATIONS OF RECENT PATENTS.

[From the "Inventors' Advocate."]

Henrik Zander, North-street, Sloane-street, Middlesex, improvements in steam-engines, steam boilers, and condensers, Dec. 17.—It is well known that a paddle-wheel should not exceed a given velocity, in order to obtain the reaction of the water; thus in large marine engines it has been requisite to diminish the action on the paddle-shaft, by introducing a cog-wheel that is in gear with a smaller wheel of the engine. In large engines, the cogs of these wheels are obliged to be made of sufficient strength, which causes much friction, and greatly tends to reduce the power of the steam-engine.

The inventor does away with this friction by putting, in the place of wide cog-wheels, a series of wheels together, whose diameters are equal, yet the cogs of each wheel do not work parallel, but are a little in advance, or separately situated, so that when the cogs of the driving-wheel take into the cogs of the wheel that is on the paddle-shaft, they will meet at divided points, without causing so much friction.

In order to keep the action of the driving wheel above the paddle-shaft wheel, the inventor employs a circular rod, the lower part of which is connected with the piston-rod, and the upper end is connected with the crank shaft of the driving-wheel.

The improved boiler has a smaller boiler in its centre, just above water mark, so that the steam that is created in the outer is employed to heat the water of the inner boiler, and the superabundant steam passes off into the air through a valve hole, by which means the boiler is not so liable to burst.

Another boiler is cast in a longitudinal form, and small divisions of metal are secured within, so that in appearance the boiler possesses a series of square tubes, which, at sea, is highly important, as the reeling of the vessel cannot leave any part of the under surface of the boiler without water.

The condenser is constructed with a series of thin plates, zig-zag or circular. There is a safety valve which requires some further explanation to make it better understood.

Bryan J. Anson Bromwich, Clifton-on-Tyne, Worcester, improvements in machinery to be worked by the application of the expansive force of air or other elastic fluid to obtain power, Dec. 17.—The first motive power of this machine is obtained by condensing or compressing air in a vessel, and as this air passes at intervals into a heat chamber that is surrounded by a furnace, its expanding power causes the pistons to work up and down the cylinders of the engine. A parallel radiating rod, moving with the main beam, causes the air pump to supply the condensing vessel, while another rod is employed to open and shut the air cocks that convey the air to the heated or expanding chamber, as well as to pass off the air that has worked the piston.

Any of the gases may be employed to work an engine on the principle of this invention, which is to supersede steam power.

Joseph Pons, Union-crescent, Kent-road, improved process of hardening wood and iron, and rendering wood repulsive of vermin, and proof against dry-rot, Dec. 21.—This invention consists in the impregnating wood with a solution of sulphate of iron, or a solution of iron mixed with other materials, and in hardening iron by plunging it at a red heat into a similar solution.

A quantity of iron filings or turnings is dissolved in nitric acid, and then alum, saltpetre, and prussic acid, in certain quantities, are added, having each been previously separately dissolved in warm water. Water is added to the solution until it will indicate 5 deg. of Beaume scale. The wood is to be steeped in tanks of this chemical solution. Four days are sufficient to saturate a log of from four to six inches section.

Cast-iron is hardened by heating it to a blood or cherry-red, and plunging it in the above solution.

Wrought-iron is to be hardened by covering it with a paste composed of the above-mentioned materials, thickened with a quantity of size, the iron being cold. It is afterwards to be placed in a furnace, and heated to a blood red, thrown into the paste composition for a few minutes, and lastly plunged into the firstly-described chemical solution.

Matthew Punshon, Norfolk-street, Blackwall, engineer, an improved steam-engine; certain parts of which improved steam-engine are applicable to steam-engines on the ordinary construction, Dec. 20.—This improved steam-engine, is principally intended for steam navigation, and the drawings annexed to the specification consist of various views of a marine engine, very elaborately detailed. The invention consists in the applying of a new parallel motion to the cylinder of an oscillating engine, which parallel motion partakes of the oscillating motion of the cylinder, and preserves the parallelism of the motion of the piston-rod in whatever position the cylinder may be, thus obviating the principal objection to oscillating or vibrating engines—the one-sided friction or strain of the piston-rod on the stuffing-box, and the piston on the interior of the cylinder.

This parallel motion has very much the appearance of one division of a "lazy tong." The top of the cylinder is squared, and on each side of the square are placed a pair of bell-crank levers, or levers forming the two sides of a triangle, which the patentee calls "radius levers." Their centres work upon pivots on the cylinder top. The lower arms are joined by two equal lengthed rods, one end of each of which is jointed to a lower arm of a radius lever, and the others are jointed to one another. The upper arms of the radius levers are connected to the head of the piston-rod by parallel and equal lengthed connecting rods. Thus the arms of the radius levers on one side of the cylinder, cannot either approach to or recede from a line coinciding with the axis of the cylinder, without causing the pair on the opposite side to approach or recede in the same proportion. When the piston is at the bottom of the cylinder, the top arms of the radius levers are at their points nearest the cylinder; as the piston rises, these arms recede from one another; at the middle of the stroke they are at their greatest distance from one another, and the parallel and equal lengthed rods connecting these arms with the piston-rod head, are on a parallel line. As the piston further rises, the top arms of the radius levers approach each other, until at the top of the stroke, when they are again at their nearest point of approximation. Of course when the top arms of the radius levers are widest extended, the lower arms are nearest to each other. Thus the parallel motion of the piston-rod with the axis of the cylinder is preserved, notwithstanding its vibratory or oscillating motion. The same parallel motion may of course be used in stationary cylinders.

Another novel feature in this engine is the working of the pumps by an action derived from the oscillating motion of the cylinder, by means of a lever and connecting rods, the lever vibrating with the cylinder, and working the pumps by the connecting rods.

There is, lastly, a new expansion slide-valve gear. The difficulty Mr. Punshon proposes to overcome is, that in other expansive gear, when the engine is reversed, the eccentric is in the opposite direction, and, therefore, does not act. The patentee raises and depresses the bearings of the usual Y shaft, and, consequently, the slide, as much as the lap of the slide or expansion of the steam requires, and this he does by working the lap of the slide separately by the motion of the piston, so that the "lead," as it is technically called, of the engine, shall always be in the right direction. In this action of the slide valves, it is necessary that the induction and eduction passages of the steam should be the reverse of the usual way.

Charles Wye Williams, Liverpool, Lancaster, certain improvements in boilers and furnaces, designed to economise fuel and heat, Dec. 21.—The inventor claims the method of introducing air to the bridge or flame bed, whereby the combustible particles are more completely ignited before they can be exhausted in the flue or chimney.

Firstly, he introduces two or more long square perforated tubes, so as to intercept the gases passing over the flame bed; the air that enters the holes at the ends of the tubes mingles with the flames, and assists in consuming the particles as they pass over the red-hot bed, formed of bricks that are made of fire-clay.

Secondly, by the application of distinct pipes, air is conducted to the bridge and flame bed. This plan is adopted on occasions when the air cannot be introduced at the sides, but must be brought from the front or back through separate tubes.

Thirdly, to render a more complete ignition of the fuel in the furnace, perforated tubes are so situated in the ash-pit, that the air becomes equally divided in all parts, thus rendering combustion more perfect.

Fourthly, a current of air is admitted to the flame bed by means of a fan. The last improvement is for introducing a moveable false bridge, to prevent the coal from reaching the flame bed, as well as to shorten or diminish the surface of the fire.

THE "GREAT WESTERN."—We are happy in being able to say that the examination of this noble vessel, since her laying up, shows that there is neither spot nor blemish in her, that she does not require caulking or coppering, beyond a few sheets to replace those which have been rubbed off by the coal vessels, or have been removed for the purpose of a thorough examination. All the parts of the engines which are not fixtures have been taken out and thoroughly examined, and are now in progress of replacement. The plan of the directors is to overhaul her completely once a year; and we should say, after 35,000 nautical miles steaming per annum, an almost indispensable one, if confidence is to be maintained with the public. We understand the poop deck is to be lengthened sixteen feet, and that the whole of the officers, engineers, stokers, and servants, whose berths below were a great inconvenience and annoyance to the fare cabin passengers, are to be accommodated on deck; also that the fore state rooms are to be all equal in the fore and after accommodation, the fore state rooms having been considerably enlarged. She will sail on the 20th of February.—*Bristol Mirror.*

PUBLIC COMPANIES.

MEETINGS.

BRAZILIAN COMPANY.—A GENERAL MEETING of the holders of *Cata Branca* Shares will be held at the office of the company, No. 4, Broad-street-buildings, on Wednesday, the 22d instant, at One o'clock precisely. January 11.

BRAZILIAN COMPANY.—A GENERAL MEETING of the holders of *Conceicao* Shares will be held at the office of the company, No. 6, Broad-street-buildings, on Thursday, the 23d instant, at One o'clock precisely. January 11.

CONSOLIDATED COPPER MINES OF COBRE ASSO-
CIATION.—Notice is hereby given, that a HALF-YEARLY GENERAL MEETING of the proprietors of this association will be held at the office of the company, 26, Austin-frs., on Monday, the 27th day of January instant, at One o'clock precisely. By order of the court of directors, **WILLIAM LECKIE, Secretary.** January 7.

DUKE OF CORNWALL'S HARBOUR AND LAUNCESTON AND VICTORIA RAILWAY COMPANY.—Notice is hereby given, that pursuant to the Act of Parliament, the next HALF-YEARLY GENERAL ASSEMBLY of the proprietors of this company will be held at the London Tavern, Bishopsgate-st., in the city of London, on Thursday, the 5th day of February next, at One o'clock precisely. By order, **GEORGE DYSON, Sec.** 3, Copthall buildings, Jan. 13.

GREAT WHEEL CHARLOTTE MINING ASSOCIATION.—A SPECIAL GENERAL MEETING of the shareholders will be held at the George and Vulture, on Monday, the 27th instant, at One o'clock precisely, to take into consideration the present state and prospects of the Mine. 16, Lawrence Pountney-hill, Jan. 17.

LONDON AND BIRMINGHAM RAILWAY.—Notice is hereby given, that the February HALF-YEARLY GENERAL MEETING of the Court of Proprietors of the London and Birmingham Railway Company will be held in Birmingham, at Dea's Royal Hotel, on Friday, the 7th of February next, at Eleven o'clock in the forenoon. The chair to be taken at twelve o'clock precisely. **GEORGE CARR GLYN, Chairman of the Board of Directors.** **J. F. LEDSAM, Dep. Chairman of the Board of Directors.** Euston Station, Jan. 14. By order, **RICHARD CREED, Sec.**

RIO DOCE COMPANY.—Notice is hereby given, that the ADJOURNED GENERAL MEETING of the shareholders of this company, advertised to be held at the office of the Company, No. 19, Bishopsgate-st., within, on Thursday, the 16th inst., is FORWARDED to Thursday, the 23d inst., London, Jan. 13. By order of the Board, **R. MESSER, Sec.**

UNITED MEXICAN MINING ASSOCIATION.—Notice is hereby given, that a HALF-YEARLY GENERAL MEETING of proprietors of this association will be held at the London Tavern, Bishopsgate-st., on Wednesday, the 29th inst., at One o'clock precisely. By order of a court of directors, **JOHN MATHER, Sec.** No. 34, Old Broad-street, London, January 9.

CALLS.

BRITISH SILVER-LEAD AND COPPER MINING COMPANY.—The directors of the British Silver-Lead and Copper Mining Company do hereby give notice, that they have this day made a CALL of FOUR POUNDS per share on the new shares (equal to One Pound per share on the old shares) in the above company, payable, on or before the 28th day of January next, at the Liverpool Banking Company, South Castle-street, Liverpool; or at Messrs. Currie and Co., Bankers, London, on their account. **R. SHERATON, Secretary.** Company's office, Brasill-buildings, Drury-lane, Liverpool, Dec. 24.

BAHIA STEAM NAVIGATION COMPANY.—NOTICE OF CALL.—The directors having this day resolved to make a CALL of ONE POUND per share on each of the shares in this undertaking, the Proprietors are hereby required to pay the same on or before the 23d day of February next, to the bankers of the Company, Messrs. ROBERTS, CURTIS, and Co., 15, Lombard-street. It will be necessary for the holders of scrip certificates to produce the certificates on which such payment may be made, in order that the numbers of the same may be inserted in the bankers' receipt. By order of the Board, **CHARLES SAUNDERS, Hon. Sec.** Lombard-street-chambers, Jan. 2.

BAHIA STEAM NAVIGATION COMPANY.—CAUTION TO SHAREHOLDERS.—The directors consider it their duty to inform the shareholders, that the FIFTH CALL of ONE POUND per share, already advertised, must be paid on or before the 23d day of February next, as all shares on which such Call shall not be paid will become positively FORFEITED to the company, under the 21st clause of the Deed of Settlement.—Dated January 1.

BOLTON AND PRESTON RAILWAY.—CALL OF FIVE POUNDS PER SHARE.—Notice is hereby given, that the Directors of the Bolton and Preston Railway Company have made a Call for the payment of £5 on each of their respective shares.—Messrs. Dixon and Wardell, Chester; the Northern Bank, Liverpool; Messrs. W. Jones, Lloyd, and Co., Manchester; Messrs. Jones, Lloyd, and Co., London. By order of the Board of Directors, **PETER SINCLAIR, Secretary.** Bolton, January 9.

CHESTER AND CREWE RAILWAY.—CALL OF FIVE POUNDS PER SHARE.—The directors of this company, having resolved at a meeting held this day, to CALL (under the provisions of an Act of Parliament) for an instalment of FIVE POUNDS per share, Notice is hereby given, that the proprietors of shares are required to pay on or before the 6th day of February next, to one of the undermentioned bankers, the sum of £5 on each of their respective shares.—Messrs. Dixon and Wardell, Chester; the Northern Bank, Liverpool; Messrs. W. Jones, Lloyd, and Co., Manchester; Messrs. Jones, Lloyd, and Co., London. **J. UNIAKKE, Chairman.** Chester, January 6.

REDMOOR CONSOLIDATED MINING COMPANY.—Notice is hereby given to the shareholders, that the managers have made a further CALL of FIVE SHILLINGS per share (being the eighth), payable at Messrs. Bosanquet and Co., 75, Lombard-street, on or before the 15th day of February next. 7, St. Mildred's Court, Jan. 14.

REETH CONSOLIDATED MINING COMPANY.—Second Call.—The directors of the Reeth Consolidated Mining Company hereby give notice, that they have this day made a CALL of TEN SHILLINGS per share upon the shares of this company, and the proprietors of shares therein are required to pay the amount, on or before the 12th of February next, at the bank of Messrs. William Williams Brown, Charles Barr, and Co., Leeds. By order of the directors, **JOHN BLACKBURN, Secretary.** N.B.—Shareholders neglecting to pay their calls will incur the absolute forfeiture of their shares.

ST. HILARY COPPER MINING COMPANY.—Notice is hereby given, that the directors now find it necessary to make the CALL of FIVE SHILLINGS per share voted at the meeting held on the 22d October last. The shareholders are therefore requested to pay the same into the banking-house of Messrs. Barnett, Hoares, and Co., No. 62, Lombard-street, on or before Monday, the 9th instant. No. 15, Great St. Helen's, January 14th, 1840.

DIVIDENDS.

EUROPEAN GAS COMPANY.—The Directors hereby give notice, that the HALF-YEARLY DIVIDENDS, due on the 1st of February next, will be PAID at the COMPANY'S OFFICES, 26, Finsbury-dre., London, on that and every following day, between the hours of Eleven and Three o'clock, and that an EXTRAORDINARY MEETING of Proprietors will be held at the same place, on Thursday, the 6th day of February next, at One o'clock precisely. London, January 17. By order of the Board, **ARTHUR SPAFF.**

UNITED HILLS MINE COMPANY.—The directors of this company hereby give notice, that a DIVIDEND of SEVEN SHILLINGS and SIXPENCE per share, has been this day declared, the payment to commence on Friday, the 7th of February next, between the hours of Eleven and One o'clock, and to be continued on every subsequent Friday. The shareholders are requested to leave at the office of the Company, on or before the Tuesday previous to the day of payment, a list of their shares with the numbers and amount of the same. By order of the Directors, **JAMES SMITH, Sec.** 8, Adam's-court, Broad-street, Jan. 9.

WICKLOW COPPER MINE COMPANY.—A DIVIDEND of SEVEN AND A HALF PER CENT. has been declared by the Wicklow Copper Mine Company for the half-year ending 31st September, 1839, which will be payable on and after the 30th March, at 27, Tokenhouse-yard, London, and at 43, Bower-street, on all shares of the capital stock of the company issued before said 31st September. Dublin, January 13.

THE PATENT SAFETY FUSE. FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the safest, cheapest, and most expeditious mode of effecting this very hazardous operation. From many testimonials to its usefulness with which the Manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c. &c. "I am very glad to hear that your recommendations have been of any service to you. They have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, **BICKFORD, SMITH, & DAVEY,** Cornhill, Cornwall.

KING'S COLLEGE, London.—DEPARTMENT OF CIVIL ENGINEERING AND SCIENCE, as applied to ARTS and MANUFACTURES. The Classes in this Department will be RE-OPENED on Tuesday, the 21st of January next.
MATHEMATICS.—Professor Rev. T. G. Hall, M.A.
NATURAL PHILOSOPHY AND MECHANICS.—Professor Rev. H. Mosely, M.A., F.R.S.
CHEMISTRY, THEORETICAL AND PRACTICAL.—Professor Daniell, F.R.S.
EXPERIMENTAL PHILOSOPHY.—Professor Wheatstone, F.R.S.
GEOMETRICAL DRAWING, &c.—J. Bradley, Esq.
MANUFACTURING ART, AND MACHINERY.—E. Cowper, Esq.
MINERALOGY.—J. Tennant, F.R.S.
PRACTICAL SURVEYING.—H. J. Castle, Esq.
Particulars may be obtained upon application at the Secretary's office. December 21. **J. LONSDALE, B.D., Principal.**

AGENCY WANTED.—AN ACTIVE MAN OF BUSINESS, established in London, who has extensive connections both here and abroad, desires to be appointed London agent to any respectable house, either on commission or otherwise; his offices are centrally situated, and he can offer security.—Apply to Mr. Fiddick, Adelphi chambers.

DUFFRYN LLYNVI AND PORTH CAWL RAILWAY.—TO SUPERINTENDENT OF RAILROADS.—WANTED, A COMPETENT PERSON to superintend the DUFFRYN LLYNVI AND PORTH CAWL RAILROAD. He will be required to devote the whole of his time in overlooking the road, directing the requisite repairs of the same, and enforcing the due observance of the provisions of the "Acts of Parliament" and "Bye-Laws," made in pursuance thereof. Salary £100 per annum. Application for the situation, accompanied by testimonials of competence and character, to be addressed to Mr. Fitzmaurice, Porth Cawl, Pyle, Glamorgan, on or before the 10th day of February next. By order of the committee, **LEWIS R. FITZMAURICE, Clerk to the Company.** Porth Cawl, January 16, 1840.

MR. COWARD has obtained an INJUNCTION from his Honour the Vice-Warden, to PREVENT the SALE of the MINING MATERIALS at Gunnis Lake, Calstock, as advertised in the last *Cornwall Gazette* and *West Briton* newspapers.—The public are, therefore, informed that the sale will not take place.—Gunnis Lake, Jan. 16.

NEW WORK ON THE IRON TRADE, TRACING ITS RISE AND PROGRESS, WITH ITS PRESENT STATE; carefully collected and compiled from authentic and official documents. The first chapter of which will appear in the pages of
THE MINING REVIEW:
A RECORD OF GEOLOGY, MINERALOGY, AND METALLURGY;
Edited by HENRY ENGLISH, F.G.S., on the 1st February, and may be had, stitched in a cover (through any bookseller or newsman) price SIXPENCE. The work will be completed in Twelve Monthly Parts, and arranged as to form a separate volume at the end of the year, the cost of which, including much scientific matter, and reports of the proceedings of learned bodies, will not exceed Six Shillings.—The work will also be published as a monthly

GRATUITOUS SUPPLEMENT TO
THE MINING JOURNAL,
RAILWAY AND COMMERCIAL GAZETTE,
Forming a complete Record of the Proceedings of all Public Companies.

The MINING JOURNAL is the only Newspaper exclusively devoted to Geology, Mineralogy, and Metallurgy; combining therewith Reports of the Proceedings of all Public Companies, Correspondence from the English and Foreign Mining Districts, Sales and Purchases of Ores, Prices of Metals and Materials, Prices of English and Foreign Funds, Shares in Mines, Railways, Joint-Stock Banks, Canals, &c., with Parliamentary Summaries, London Gazette, and much original and interesting Scientific Intelligence, &c. forming an invaluable record of every occurrence relating to MINES, RAILWAYS, JOINT-STOCK BANKS, &c.

The MINING JOURNAL is published at Two o'clock every Saturday afternoon, at the office, 12, Gough-square, Fleet-street, London, price Sixpence, and may be had of all booksellers and newsvendors in town and country.

New Scientific Periodical.—On the 1st of February, price 1s., handsomely printed in quarto, with illustrations, No. 1. (to be continued monthly) of
THE SURVEYOR, ENGINEER, AND ARCHITECT.—An original and authentic Journal of the progress of useful science. Under the management of an association of professional gentlemen. Mr. Robert Mudie, Literary Conductor. London: Grattan and Gilbert, 51, Paternoster-row, to whom all communications are to be sent free of expense.

THE MECHANICS' MAGAZINE of this day (double) No. 858, price Sixpence, contains descriptions of Parkin's Patent Improvements in Paving with Wood (with thirteen engravings); Hodgson's Patent Improvements in Paing and Building (with five engravings); Johnston's Patent Hinge-making machinery; Life and Labours of Telford—No. IV.—The Caledonian Canal. Mode of Forming the Gorges of Glaciers (with engraving)—By Mr. T. Kentish; Description of an Oblique Cylinder Engine (with engraving)—By Mr. Crickmer, Engineer; Plan for Applying Carbonic Acid to the preservation of beer (with engraving)—By E. U. Berry, Esq., Surgeon; Answers to Astronomical Questions—By G. Scott, Esq.; Steam at Sydney—By Mr. Joseph Miller, C.E.; (Notice of Mr. S. Hall's Refracting die-wheel, Mr. Rennie's Experiments on Propellers—Reply to Mr. Holebrook's Remarks); On Machinery considered in Relation to the Prosperity of the Working Classes—By M. Arago; On American Amalgamation—Saving of Mercury—By J. Friedaux, Esq., F.G.S.; Receipts for making different kinds of Glass; Hunt's Patent Propelling and Steering Apparatus; On the Doctrine of Parallel Lines—By L. K. L.; Instrument for ascertaining Temperature of Water at Great Depths; Notice from Dr. Hare on the Fusion of Platina, &c.; Packer's Pole Lathe Chuck.—Penny Postage.—seetroot Bread.—Calico Printing in Naples.—Exportation of Iron Steamers.—Cochran's Many-Chambered Rifle.

Complete sets (thirty-one volumes), half cloth, price £13 1s.
MECHANICS' MAGAZINE, PATENT AGENCY, and DESIGN REGISTRATION OFFICE, 161, Fleet-street, London.

RAILWAY MAGAZINE, and COMMERCIAL JOURNAL,—This Work, which has attained the greatest celebrity for the value of its articles, and the uniform success in all causes it has advocated, will now be published weekly, price Fourpence-halfpenny. The first Number was published on the 17th August, consisting of twenty-four closely and handsomely printed pages. It is intended to contain full and accurate reports of all railway and joint-stock meetings; accounts of new companies, banks, mines, assurances, canals, docks, times and fares of all railway trains throughout the kingdom; prices of stocks, shares, gold, silver, cotton, corn, wool; general, mechanical, and scientific intelligence, &c. &c. Orders received by all news agents, and at the office, No. 3, Red Lion-court, Fleet-street, London. Agents for the paper, and for receiving advertisements, in Liverpool, Arnold and Son, Post-office-place; Manchester, Lewis, Market street; and Birmingham, Mansell and Co., 31, Union-street.

*To SUBSCRIBERS.—The price of the "Railway Magazine and Commercial Journal" will for the future be FOURPENCE-HALF-PENNY, stamped.

TO INVENTORS AND SCIENTIFIC MEN.
THE INVENTORS' ADVOCATE, and JOURNAL OF INDUSTRY. A NEW WEEKLY BRITISH and FOREIGN MISCELLANY OF INVENTIONS, TRADE, MANUFACTURES, LITERATURE, and THE ARTS, is published every Saturday Morning, price 5d., stamped. Vol. 2, No. 1, (forming No. XXII. of the work), was published Jan. 4; also the Index, Title, &c., to Vol. 1, in an enlarged Number (No. XXI.), price 5d. Vol. 1 now ready, price 18s., handsomely bound.

REMARKS OF THE PUBLIC PRESS: "A new periodical, entitled the 'Inventors' Advocate,' has just been published by Mr. Kidd, of Tavistock-street, Covent-garden. We think the design a good one, and wish the publication every success. As it is intended to be a Weekly British and Foreign Miscellany of Inventions, Discoveries, and the Fine Arts, it will more particularly apply itself to inventors, patentees, and patrons of the arts, but as it also contains the usual characteristic features of a literary paper, it cannot fail of being interesting and attractive to the public in general. It purports to afford an efficient medium of communication between inventors, patentees, capitalists, and the public at large—calculated at once to do justice to the inventive genius of all nations, and to elicit the stores of innate intelligence and capacity, which lie hidden or neglected from a deficiency of patronage or of fostering protection, or a mere want of funds. The 'Inventors' Advocate,' and 'Inventors' Recorder,' is not designed to be of an ephemeral nature, but to form a work of constant reference, having relation to all inventions and discoveries, and being conducted on a plan which will at once save much labour and research to an inventor, and guarantee a safe outlet to the capitalist. A work of this nature is certainly still a desideratum, and we have no doubt that this new periodical will ably and efficiently supply it."—*Conservative Journal.*

"The 'Inventors' Advocate' is a new weekly contemporary, embracing a very wide field of arts, sciences, and literature. Its principal feature is the record of patent inventions, both domestic and foreign. This will be a most useful guide to projectors and inventors; and any suggestions to improve our patent laws are also very desirable."—*Literary Gazette.*

"In addition to its more immediately avowed features—science, inventions, discoveries, and the fine arts—this paper will rank high as a theatrical journal. Its criticisms on the drama are masterly, bold, forcible, honest, and manly. Praise and censure are awarded with the nicest discrimination, and every justice is rendered both to managers and actors. 'To be honest,' says Will, Shakespeare, 'it goes to be one man picked out of ten thousand' and certainly an honest theatrical critic is a rare one in the days we live in."—*Weekly Chronicle.*

"This is quite a novelty in the scientific world; but it is a most useful and agreeable novelty, and one whose appearance will be hailed with a cordial welcome by some thousands of practical men, whose interests, hitherto, have been only partially and imperfectly represented."—*Globe.*

London: published for the proprietors, every Saturday morning, at Seven o'clock, y W. Kidd, 7, Tavistock-street, Covent-garden.

METEOROLOGICAL JOURNAL, 1840.
Jan. 1. 9 from 28 to 35. 29.10 to 26.19. Monday 13. 21. 37. 30.08. 29.58.
Thurs. 10. 35. 28. 36.31. 36.49. Tuesday 14. 29. 43. 29.84. 29.54.
Friday 11. 35. 28. 36.49. 36.24. Wednesday 15. 29. 43. 29.82. 29.52.
Saturday 12. 35. 28. 36.20. 36.14.

Prevailing wind, S.W.
Except the 6th, generally cloudy; a little rain fell on the 14th and following day.
Edinburgh. **CHARLES LINDY ADAMS.**

MEETINGS OF SCIENTIFIC BODIES.

IN THE ENSUING WEEK.

SOCIETY.	PLACE OF MEETING.	DAY.	HOUR.
Royal Asiatic	14, Grosvenor-street	Saturday	2 P.M.
British Architects	16, Grosvenor-street	Monday	8 P.M.
Statistical	4, St. Martin's-place	Monday	8 P.M.
London Electrical	Adelaide-street	Tuesday	8 P.M.
Civil Engineers	26, Great George-street	Tuesday	8 P.M.
Horticultural	21, Regent-street	Tuesday	2 P.M.
Geological	Somerset House	Wednesday	8 P.M.
Medico-Botanical	22, Backville-street	Wednesday	7 P.M.
Royal	Somerset House	Thursday	8 P.M.
Antiquaries	Somerset House	Thursday	8 P.M.
Scientific Society	Charlotte-st., Bloomsbury	Thursday	7 P.M.
R.I. Society of Literature	St. Martin's-place	Thursday	4 P.M.

PUBLIC COMPANIES.

MEETINGS.

London Conveyance Company	George and Vulture	Jan. 20.	1.
Australasian Agricultural Company	12, King's Arms-yard	21.	1.
Brazilian Co.—Cata Bianca Shares	6, Broad-street-buildings	22.	1.
Ditto—Conceicao Shares	ditto	23.	1.
Rio Doce Company	19, Bishopsgate-street-within	23.	12.
Consolidated Copper Mines of Cobre	26, Austin-frs.	27.	1.
Great Wheel Charlotte Mining Ass'n	George and Vulture	27.	1.
Patent Dry Gas-Meter Company	16, Broad-street-buildings	28.	12.
United Mexican Mining Association	London Tavern	29.	1.
Equitable Gas Light Company	21, John-street, Adelphi	29.	12.
Edinburgh, Leith, & Newhaven R'way	Princes-street, Edinburgh	29.	1.
Phoenix Gas-Light Company	Bridge-house Hotel	29.	1.
London and Brighton Railway	London Tavern	30.	1.
York and North Midland Railway	Office, York	30.	12.
General Mining Association	52, Old Broad-street	30.	1.
Candonga Mining Association	9, Nicholas-lane	31.	1.
De Dunstanville Mining Company	Office, 26, Birch-in-lane	31.	2.
Union Bank of Australia	52, Old Broad-street	Feb. 3.	1.
Bank of British North America	7, St. Helen's place	4.	12.
European Gas Company	39, Finsbury-circus	6.	1.
Duke of Cornwall's Harbour & Railway London Tavern		6.	1.
London and Birmingham Railway	Dee's Hotel, Birmingham	7.	11.
Hibernian Mining Company	8, Austin-frs.	7.	1.

CALLS.

Rose-Down Mining Company	5s. Jan. 21.	Bosanquet and Co.
Llanelli Railway and Dock Co.	10s. 21.	Cocks, Biddulph, and Co.
Taff Vale Railway	10s. 22.	London & Westminster Bank.
South Eastern Railway	3s. 25.	Glyn and Co.
Great Western Railway	10s. 27.	Glyn and Co.
British Silver-Lead and Copper	4s. 28.	Currie and Co.
Fire Preventive Works	1s. 28.	London Joint-Stock Bank.
De Dunstanville Mining Company	19s. 31.	Wright and Co.
Edinburgh, Leith, & Newhaven R.	2s. Feb. 1.	Williams, Deacon, and Co.
Eastern Coast of Central America	1s. 60.	Moorgate-street.
Bahia Steam Navigation	10s. 3.	Roberts and Co., Lombard-st.
Dancombe Mining Company	1s. 3.	Wright and Co.
Ulster Canal Company	2s. 3s.	Smith, Payne, and Co.
Chester and Crewe Railway	5s. 6s.	As former calls.
Cheitham & Gt. Western R'way	7s. 10s.	Roberts and Co.
British Waterproo Company	8s. 10s.	71, Lombard-street.
Reeth Consolidated Mining Co.	10s. 12s.	Brown, Barr, and Co., Leeds.
Rhymney Iron Company	8s. 13s.	7, Laurence Pountney-hill.
General Reversionary Interest	10s. 14s.	Drummond, Charing Cross.
Redmoor Consols	5s. 17s.	Bosanquet and Co.
Bolton and Preston Railway	5s. 19s.	As former calls.
Cambrian Iron and Spelter Co.	2s. 10s. April 10.	London Joint-Stock Bank.

Bank of Australasia	4 per cent.	5, Lothbury	Jan. 15.
Provincial Bank of Ireland	4 per cent.	42, Old Broad-street	15.
British and Colonial Export Company	5 per cent.	98, Leadenhall-street	21.
Port Gloucester Mills Company	5 per cent.	23, Lombard-street	21.
British Iron Company	5 per cent.	3, New Broad-street	26.
European Gas Company	5 per cent.	At the Office	Feb. 1.
United Hills Mine Company	7s. 6d.	At the Office	7.
Mining Company of Ireland	10 per cent.	At their Offices	March 1.
Wicklow Copper Company	7 1/2 per cent.	42, Tokenhouse-yard	30.

WEEKLY RAILWAY TRAFFIC RETURNS.

LONDON AND BIRMINGHAM RAILWAY.	
[Length of Line, 119 1/2 miles.]	
The gross amount for conveyance of passengers, parcels, carriages, horses, and mail, for the week ending the 11th January	£9,023 2 11
For merchandise for the same time	1,870 9 8
Cattle	97 15 8
Total	£10,991 7 4

GREAT WESTERN RAILWAY.	
[Length of Line opened, 314 miles.]	
Passengers for the week ending 15th January	£1818 9 10
Parcels and merchandise	278 15 11
Total returns for the week	£2097 5 9

LONDON AND SOUTH-WESTERN RAILWAY.	
[Length of Line opened, 58 1/2 miles.]	
Total receipts for passengers, parcels, &c., on this line for the week ending January 13, 2066 6s. 7d.	

EASTERN COUNTIES RAILWAY.	
[Length of Line opened (to Romford) 10 1/2 miles.]	
Passengers to January 5	169,171
Ditto, for the week ending January 12	3,792
Total passengers	172,963

LONDON AND GREENWICH.	
[Length of Line, 3 1/2 miles.]	
Friday, Jan. 10	£110 11 10
Saturday " 11	167 8 6
Sunday " 12	106 10 11
Monday " 13	165 5 11
Tuesday " 14	114 4 0
Wednesday " 15	169 12 1
Thursday " 16	116 2 4
Total	£833 0 9

LONDON AND CROYDON.	
[Length of Line, 10 1/2 miles.]	
Friday, Jan. 10	£56 17 8
Saturday " 11	57 9 10
Sunday " 12	69 13 3
Monday " 13	57 14 8
Tuesday " 14	46 4 3 1/2
Wednesday " 15	82 17 3
Thursday " 16	57 14 9 1/2
Merchandise from 4 to 15th	43 15 4
Total	£470 6 10

NOTICES TO CORRESPONDENTS.

NATIONAL BRITISH MINING ASSOCIATION.—We intended this week to have made some remarks on the report which appeared in our last Number, embodying therewith our opinions on mining reports generally, but which we must necessarily defer until our next. We are obliged to Admiral Bullen for his polite favour, with the papers inclosed, which shall receive attention.

EASTERN COAST OF CENTRAL AMERICA COMPANY.—We have received a pamphlet relative to this company, which arrived too late for notice in our present Number. We are obliged to a "Constant Reader" for drawing our attention to the plan for descending and ascending mines, published in the last report of the Cornwall Polytechnic Society, and copied into the *Mechanics' Magazine*; but, if he had been an attentive, as well as constant, reader, he would have remembered that the paper, accompanied by plates, appeared in the *Mining Review* on the 29th of June last.

THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, JANUARY 18, 1840.

We this week give the report of the proceedings in a case to which we have, on a former occasion, made reference, as to what constitutes a "mine," in the legal interpretation of the word; the result of which, however, it may satisfy the Judge upon the bench (Mr. HEDDER), who took an active part in the proceedings, will, we think, convince our mining readers that they must not go to the Surrey Quarter Sessions, if they expect to obtain justice. If we may judge by the present instance, we should say that, to submit a case on evidence, no matter how sound, where attention is requisite to be paid, or a sufficient knowledge possessed by the bench on the question at issue, as to enable them to give their opinion, is so absurd, that, with the experience on the part of the appellants, they will rather, in future, give way to the parish authorities than place themselves in the hands of the "Hedgers and Ditchers" of Surrey. The evidence adduced on the occasion was such as must have satisfied any sensible man that the mode of working the quarries was similar to that adopted in "mines," using the term here as applied to metalliferous deposits; and upon

referring to Dr. JOHNSON, we find that he designates a quarry as a "stone mine." We do not go all the way with the learned Doctor, nor do we pretend to say that a quarry is a "mine," in the general acceptance of the term, but that it is so, legally construed, there can be no doubt, it having been laid down that, to constitute a mine, certain works shall be undertaken, shafts sunk, levels driven, &c.—no matter what may be the produce. That this has been done in the case before us, there can be no doubt: the witnesses fully proved the nature of the operations, and their similarity to other works where mineral produce was obtained, but the bench thought they knew better, and decreed that no "mine" existed, and accordingly confirmed the rate made.

The question is one of importance, and we shall, in the course of the ensuing week, obtain an opinion as to the legal definition or construction of "a mine," because, if the decision of the bench of learned magistrates at the Surrey Quarter Sessions is to be cited as an authority, we apprehend that many ironstone workings would, in like manner, be subjected to the rates so improperly, as we contend, confirmed by the "wise men" of the south. We must, however, defer until next week entering further into the subject, when we purpose bringing before our readers a case "Temple v. Stone's-End," which we think will convince Mr. HEDGER, and the great unpaid, that there requires something more than words, or self-conceit, to be able to arrive at a just conclusion.

In our advertising columns will be found the announcement of the formation of a company, to work the valuable property possessed by the Messrs. HILL, and so long known as the Plymouth Works, situated at Merthyr Tydvil. The advantages possessed by a joint-stock proprietary, from the capital which they can command beyond any individual, counterbalances, in cases like the present (where a large sum is necessary, not only in the establishment of the works, but as a floating capital) the disadvantage which we are free to confess we consider ever attendant on the conducting of works by a company, where individual enterprise and capital is found to be adequate. We have, in the instances of the splendid fortunes realised by Sir JOHN GUEST and Mr. CRAWSHAY, and the magnificent works carried on by them, proof of what may be done by the sound application of money, and a judicious management, and we regret that we cannot, in like manner, report on the Rhymney Iron Company, the Bleanavon Company, the Cambrian Iron and Spelter, the Victoria Works, the Ystal-y-fera Works, and others which we might name, carried on as joint-stock undertakings.

Of these several companies, the two first-named stand, perhaps, as exceptions, inasmuch that, although not yielding the returns contemplated, and which should have resulted from the prosperous state in which the iron trade has been for the past few years, yet we believe they are fairly managed; with reference to the others, on which we have much to say, when leisure permits, we do not hesitate to express our conviction, and at which we have arrived after personal visits and inquiries, that capital has been wastefully expended, and that loss, not only of money, but of time, has taken place; which, had the undertakings been in the hands of private individuals, instead of companies, would never have been the case.

In thus remarking on companies, formed for carrying on the manufacture of iron, we beg to be understood as not wishing them to be considered as applying to the Company under notice. As from the appointment as local managers of the Messrs. HILL, we feel confident that the works will be carried on with a most efficient system of management. Indeed, those who are at all conversant with the iron trade, will agree with us, that, seek the country through, no men could be found more competent to the performance of the duties devolving upon the office of managers, either as men of business, experience, and talent, combining scientific with practical knowledge, than the gentlemen appointed to such office.

We only trust that the directors in London will confine themselves as town managers, to making calls, declaring dividends, and attending to cash matters, while they leave to the local managers the direction and controul of the works; if this be observed, we augur favourably as to results. In treating on this subject, we may observe that the first part of the promised paper on the Iron Trade, will appear on the 1st proximo, when we shall have occasion to offer some observations on the present state and prospects of this branch of mining industry and manufacture.

The subject of the use of anthracite coal still continues to excite considerable and increasing interest, and it is with readiness we give insertion to the letters of our Correspondents, tending, as they do, to elicit much information, which must considerably enhance the value attached to property of this nature. We do not propose entering into the points of discussion or difference between the parties, who have, through the medium of our columns, taken certain views, and expressed their opinions in words not to be misunderstood, on the subject of Mr. PLAYER's patent; at the same time, we cannot, in reference to such communications, do otherwise than deprecate the personalities in which certain writers have indulged. It is unnecessary for us to tell them, that they do not advance their position, which, if well grounded, requires not such adventitious aid, and we trust that the letter addressed to us by Messrs. MANBY and VICKERY, inclosing cases submitted to counsel, with opinions thereon, from which we have made extracts, as will be found in another part of our Journal of this week, will remove the doubts or scepticism which has in some quarters prevailed.

We give Mr. WREY full credit for the desire he has manifested of affording to the public all the advantages which may be contemplated, as arising out of the use of a furnace for the application of anthracite, without being clogged with patent rights, but we must say that, in our opinion, this gentleman "proves too much," as we remember hearing counsel once remark with reference to a witness; and that he does not come into the arena of discussion with that degree of coolness which is at all times necessary on occasions like the present; this, we think, must be self-evident on a perusal, by that gentleman, of his lucubrations in print.

We are pleased to observe the progress which the agitation of the subject has caused, and shall gladly lend our aid in giving pub-

licity to the remarks of our Correspondents on a matter so interesting and important, while, we think we do not say too much, when we promise to our readers on an early day a paper on "Anthracite," which will place before them much valuable information—the acquisition of which has been the result of much time and attention devoted to the subject.

It is with feelings of pleasure that we refer our readers to the report presented to the proprietors in the "London Joint-Stock Bank," which will be found inserted in our advertising columns of this day, as affording additional evidence of the success attendant on the joint-stock banking system, where a judicious management prevails. The net profit, after making the necessary deductions, from the 20th May to 31st December, is stated at 15,809l. 16s. 7d., or at the rate of about 26,000l. per annum, on a paid-up capital of 310,800l., or upwards of 8 per cent. These figures are, we consider, alone sufficient to prove, that joint-stock banks are not only calculated to be of public benefit, but to repay the shareholders for the investment of capital, while the present is a gratifying instance of the candour on the part of the directors, in submitting to the proprietary a clear statement of account of profit and loss—thus proving that no concealment is necessary, where all is fair and above board, and, although situated so near to the "Bank Parlour," that the company have not suffered from their contiguity, or been affected by any atmospheric influence which is said to pervade that immediate vicinity.

THE FUNDS.—SATURDAY MORNING.

ENGLISH FUNDS.	
Bank Stock, 1784	New 34 per Cent. Annuities, 304 8/12
3 per Cent. Reduced, 914 1/2	2 per Cent. Consols Acct., 914
3 per Cent. Consols Ann., 91 9/12	India Bonds, 3 pm.
34 per Cent. Reduced, 912 1/2	Exchequer Bills, 9 12 pm.
FOREIGN FUNDS.	
Belgian Bonds, 1024	Mexican 4 per Cent., 39
Brazilian 5 per Cent., 75	Spanish Bonds, 25 1/2
Colombian 6 per Cent., 24	Ditto Passive, 64 1/2
Danish 3 per Cent., 73 1/2	Ditto Deferred, 114 1/2
Portuguese, New 5 per Cent., 35 1/2	Dutch 2 1/2 per Cent., 52 1/2
Ditto 5 ditto, 23 1/2	Dutch 3 per Cent., 100 1/2
SHARES.	
St. John Del Rey Mining, 1 1/2	London & Greenwich, 12 1/2
British Iron, 5	London & Birmingham, 151 1/2
Cobre, 304	Ditto 1-Share, 23
United Mexican, blk. scrip, 3 1/2	Ditto New, 33
Ditto, red scrip, 6	London & Sth. Western, 48 1/2
Birmingham & Derby Railway, 60 5/8	London and Croydon, 104 1/2
Eastern Counties Railway, 94 1/2	North Midland, New, 13 1/2
Great Western, 45 1/2	British N. American Bank, 37 1/2
New ditto, 182 1/2	Colonial Joint-Stock Bank, 32 1/2
London & Brighton Railway, 188 1/2	London & Westminster, 22 1/2
London and Blackwall, 16	London Joint-Stock, 12 1/2

LATEST INTELLIGENCE.

CORNWALL.—There was no sale of copper ores on Thursday last.—Average standard of last sale, 112l. 18s.—Produce 74.—Price 6l.

PRICES OF SHARES IN LIVERPOOL.—Eastern Counties Railway, 9l. 12s. 6d.; Grand Junction, 209l.; half-shares, 79l.; London and Birmingham, new shares, 41l. 10s.; London and Brighton, 18l. 10s.; Manchester and Leeds, half-shares, 21l. 10s.; Midland Counties, 72l.; North Midland, 82l.; ditto, new, 124l. 17s. 6d.; North Union (late Preston and Wigan), 68l.—Gore's Liverpool Advertiser.

EXPORTATION OF THE PRECIOUS METALS.—The exportation of the precious metals from the port of London to foreign ports for the week ending the 9th inst., was as follows:—Silver bars to Hamburg, 208,100 oz.; Coin to Hamburg, 80,000 oz.; British West Indies, 4600 oz.; New York, 3590 oz.; Cadiz and Mogadore, 9500 oz.

IRON MASTERS' MEETINGS.—The iron masters' quarterly meetings were held in this and the adjoining towns last week. No further reduction was then made in the prices, which had, however, gone down in some instances about 1l. since the previous quarter-day. The continued flatness of trade has compelled the masters to a reduction of the wages of their workmen in some of the different branches of the iron and coal trade, but as the stocks are said not to be heavy in the country, and the depression caused solely by the state of the money market, we trust that no long season of distress will ensue in this district.—Birmingham Advertiser.

STATE OF THE IRON TRADE.—The quarterly meeting of the iron masters' was held here on Wednesday last, when a reduction in the price of iron was declared, but we do not say to what extent. Wages are also to be reduced, and the men employed in the ironworks are under notice of reduction, as follows:—colliers and miners, 3d. per day; puddlers, 1s. per ton; and blast furnace and mill men 10 per cent. There are no orders, and it is impossible to say what may be the effect of this reduction of wages.—Staffordshire Examiner.

MINING COMPANY OF IRELAND.—The smelting establishment and lead works at Ballycorus, are complete, a casting-house having been added to the works, in order to secure for the company orders for cast lead, now preferred by architects to milled lead. The Glenpatrick slate quarry is to be surrendered to the proprietor, Miss Osborne. There are favourable returns from the Killaloe slate quarries; but it has been thought advisable to withdraw all consignments of slates for sale, and to close the company's yards at Limerick and Dublin, relying altogether upon sales at the quarries and wholesale orders. Lord Audley's estate owes, it is said, 12,000l. to this company.—Dublin Pilot.

RAILWAYS IN IRELAND.—The Editor of the Dublin Pilot, alluding to the importance of the proceedings at the Commercial-buildings, Dublin, on Monday last, published in full in that paper, says:—"We believe we may congratulate the Irish people on the strong probability there exists of at least one grand branch to the south being speedily begun under the superintendence, and by the advance of the credit of Government." We do not announce the fact in an official or authoritative way, but the information having come to us from a quarter on which we place some reliance, we feel bound to give it."

REDRUTH INSTITUTION.—Mr. William Whitburn, of Gwennap, who has recently returned from the Island of Cuba, lately gave a description of the Cobre Mines, and the places in their vicinity, to the Redruth Institution. The writer gave a general description of such objects, institutions, manners, and municipal regulations as he had an opportunity of noticing, in a very familiar, clear, and pleasing manner. Judging from Mr. Whitburn's statements, morality and intellectual intelligence are at a fearfully low ebb in that part of Cuba which came under his notice. Slavery exists there in its worst form; and the pride, indolence, and ignorance of the Cubanos, seem to allow no hope that matters will be soon amended.

THE "PRESIDENT" STEAM-SHIP.—On Sunday last, the Royal William steamer, on her passage from London to Plymouth, fell in with, off the Start, the magnificent steamer President, on her voyage from London to Liverpool (to take in her machinery, in quite an unmanageable state, having rolled away her foremast, mainmast, &c.). The Royal William took her in tow, and brought her into the Sound during Sunday night. On Tuesday she was towed up to the dock-yard by Her Majesty's steamer Carrow, and the same evening one of the directors of the British and American Navigation Company, for whose service she is built, arrived from London to superintend her refitment.—Plymouth Journal.

LONDON AND GREAT NORTHERN TRUNK RAILWAY.—The proposed object of this undertaking appears to be to connect the Midland Grand Union and Midland Counties Railways, at Nottingham, with the Northern and Eastern Railway, near Ware, passing the towns of Melton Mowbray, Stamford, Huntingdon, St. Neot's, Hertford, &c., and bisecting or uniting with the river Trent, Grantham, Melton, and Oakum Canals, and rivers Welland, Ouse, Neuse, and other navigations which command the trade of the midland and eastern counties of England. According to the prospectus, coal might be sold in London for 16s. per ton.

ORIGINAL CORRESPONDENCE.

ON IRON MANUFACTURED WITH STONE COAL.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Mr. Pritchard's letter, of the 8th inst., certainly does not require any answer from me, but, as I wish to make some observations on the use of anthracite, I shall offer a brief comment on his two letters. In that of the 24th of December, Mr. Pritchard states that no communication has ever been received by, and, what is more to the point of "Observer's" letter, no correspondence has taken place between the committee of the South Wales Anthracite Association and any other party, relating to the manufacture of iron with anthracite. In his letter of the 8th inst., Mr. Pritchard states that he found it incidentally mentioned in one of my papers, dated August (a paper, by the way, more about hot and cold blast, and smelting and remelting, than about puddling), that I was willing to undertake the conversion of pig into bar-iron, upon having the requisite means placed at my disposal. The above embraces a pretty considerable range in the iron manufacture. Mr. Pritchard is, perhaps, not aware that pig-iron is converted into bar-iron by the operation of puddling—that process depriving pig or cast-iron of its brittleness, and giving it the properties of malleability and ductility, enabling it to bear hammering, and to be drawn through rollers to form it into a bar. The wording of my communication might not literally amount to a distinct proposition, but is not very much unlike one. I assure Mr. Pritchard he is in error with respect to "Observer," and my adopting a date for the purpose of concealment. I fully agree with "Observer" in his views of the iron manufacture, but have no occasion to conceal my opinions, as I have always expressed such with great freedom, whenever I met parties interested in the business.

I have taken a great interest in the controversy going on between Mr. Wrey and Mr. Player, on the subject of their boilers. Mr. Wrey is right in stating that he was the first to propose the method of feeding boiler fires, by having an upright column of coal to descend slowly into the draft. I saw his boiler while building, and was told by the parties employed upon it that the furnace or fire-place was to be built in an upright form at the end of the boiler, and they showed me the end prepared for the purpose. I built a furnace soon afterwards with a similar fire-place, and invited Mr. Wrey to look at it, when he immediately said it was precisely his plan, which he was anxious to introduce into use for anthracite. But I believe Mr. Wrey to be in error, when he states that Mr. Player took his notion of the plan which he has patented from that boiler, as I think I shall be able to prove shortly that Mr. Player copied a plan of mine. I would send you the grounds upon which I found this assertion, but a link in the chain of evidence is wanting—the gentleman who can supply that being at present on the Continent. I allude more immediately to the first boiler Mr. Player set to work for the Gwendraeth Iron Company, at Colebrook. It is an exact copy of my plan, excepting that mine was for a long boiler—Mr. Player's is a round one—mine having a fire running the length of the boiler, excepting a small space at each end—Mr. Player's a fire in the middle, with the boiler all round it. The essential principles being the same, feeding the fire through an opening at the top of the boiler, and carrying the draft off at the side into a tube. This will, I think, become a matter of little moment shortly. I am now fully convinced that anthracite cannot be used with advantage by means of an open draft. What I mean by advantage is, to realise that incalculable economy of fuel which the use of anthracite is capable of effecting. Much misconception exists with regard to the effects of heated air. Hot air heats a cold body up to a certain point, but there is such an elasticity in hot air, that, with a free escape, it will give out but little heat to a hot body. I notice, in the report of Messrs. Parkes and Manny, on the Anthracite steamer, they state that the air from the boiler fires enters the funnel at a temperature sufficiently high to melt zinc 700 to 800 degrees, which they attribute to a deficiency in the length of the tubes. I question whether they will find a different result with longer tubes. I believe it would be quite impossible to boil a kettle with an anthracite fire, or even a bituminous coal fire, when the flame was burnt off, if the kettle did not touch the fuel. Suppose a kettle to be suspended, or placed upon bars, over a fire, close to the fuel, but not touching, cold water would quickly heat and begin to simmer, but not actually boil. In the country where anthracite is used for fuel, a cast-iron pot or kettle (the universal cooking apparatus) will be seen bedded to a certain extent in the fire, and to that extent old kettles will be found with their bottoms burnt out, used as stoves in every collier's cabin and stone coal boat on the Swansea Canal.

I sent you some observations on the application of anthracite to steam navigation, which appeared in the Journal of the 9th November; since that period I have devoted close and patient attention to the subject, and have, I believe, succeeded in completing a plan likely to combine all the chief desiderata in the use of fuel on board steam vessels. In my former communication I recommended the use of a blast, and suggested the practicability of adding a damper or valve to retard the passage of the heated air. In lieu of the latter, I have adopted the plan of introducing into the tube leading from the boiler a porous non-conducting body, thus, by means of the blast applying a certain degree of pressure to the heated air in the boiler flues. In carrying out this principle various obstacles have presented themselves in the destruction of the grate-bars, escape of heat from the fire-door, difficulty in regulating the supply of steam, &c., all of which I expect I have surmounted. The advantages to be calculated upon are the greatest attainable economy in the use of fuel, total absence of smoke, and even the removal of the upright funnel from the deck, the exhausted air being blown off through tubes leading into the paddle-boxes, as complete a command over the supply of steam as can be had at present using bituminous coal, any boiler in use can be made use of, with trifling expense and little loss of time—no obstacle in the way of patent right.

I have submitted the plan to the consideration of the committee of the South Wales Anthracite Association, and trust they will condescend to it. In the mean time, should any of your readers or correspondents desire more detailed explanation, I shall be happy to furnish it.

I am, Sir, your obedient servant,

T. H. LEIGHTON.

Llanelli, Jan. 14.

[The letter of Mr. Leighton is a striking illustration of the usefulness of the Mining Journal, for the controversy on subject of Mr. Player's patent has elicited much valuable information, and, we believe, "brought out" several parties who had no idea of ever appearing in print. We shall be glad to hear again from our correspondent, and shall readily afford space to any communication on a subject which excites so much interest as that of the use and application of anthracite.—Ed. M. J.]

FREE MINERS' COPPER SMELTING ESTABLISHMENT.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—A correspondent in your last Journal, under the signature of "Cornubiensis," attaches some importance to the proposed formation of a "Free Miners' Smelting Establishment," and appears not only to understand the subject in all its bearings, but to take a lively interest in promoting every inquiry likely to benefit generally the mining body. He is too good a judge not to admit that circumstances alter cases, and that one position, especially in mining and smelting operations, may not be analogous to another—under which impression I will venture to notice one or two points in his last letter, for the information of those who may now be watching the progress of this inquiry, in the hope of working out some change for the better to the owners of copper ores, both at home and abroad.

In order to show that the foundation of my calculations upon a presumed average produce of copper ore for twelve months, at 8 per cent., is not strictly correct, "Cornubiensis" selects a single parcel of ore sold at Redruth, on the 2d inst., viz., 3865 tons—average produce 74 per cent.—average standard 112l. 5s.—price 5l. 7s. 6d. per ton—value 20,357l. 16s. 6d. (query, 20,451l. 17s. 6d.)—metal 2744 tons—price 17l. under the standard, or 93l. per ton—value 25,977l. sterling.

It should, however, be borne in mind, that the average produce assumed by myself, at 8 per cent. on twelve months operations, is confirmed by the general average produce of copper ores sold in Cornwall for thirty-eight years, ending 1838, as may be seen on reference to the Sixth Annual Report of the Royal Cornwall Polytechnic Society, p. 945. Besides, whether the miner or smelter gains or loses on 3865 tons of ore sold at a single sale for 20,357l., value in copper 25,977l., it is surely no fair criterion as to the result of the whole operation for twelve months on 40,000 tons of copper, sold for 225,000l.—value in copper 322,373l. It may as well be said that because a merchant loses 5 per cent. the first-

month, he is not to gain 10 per cent. on the balance of the whole year's transactions.

But let us see exactly how this mystical standard works in both cases. In the single sale at Redruth, 100 tons of ore yielded on the average 7½ tons of copper, and the average standard or selling price was 112½. 5s. per ton of copper, being 8½. 2s. 6d. per ton of ore, less 2½. 15s. per ton, allowed by the miner to the purchaser to cover returning charges; that is the cost of taking the ores from Cornwall to Wales, and realising the value in copper, making the net value to the miner 5½. 7s. 6d. per ton of ore—whereas, according to my statement, given in your Journal on the 28th ult., for twelve months operation, the 100 tons of ores yielded 8 tons of copper, average standard or selling price 105½. per ton of copper, being 8½. 8s. per ton of ores, less 2½. 15s. for returning charges, the net value to the miner is 5½. 13s. per ton of ore, being 5s. 6d. per ton of ore better for the miner, and worse for the smelter—making, in fact, 11,000½. more profit to the miner on 40,000 tons of copper ore sold, and so much more for the smelter to pay for it, besides a difference of 1½. less receivable on the price of copper, the selling price of copper being, as in the first case, 17½. 5s. under the standard, or 95½. per ton, and in the last, 11½. under the standard, or 94½. per ton.

Nevertheless, "Cornubiensis" seems to contend that, by the result of this single sale at Redruth, there is some ground to question the accuracy of my calculations, both as regards the produce and standard adopted. For, he observes, "in commenting, therefore, upon the figures of 'A Miner,' there does not appear to be the certainty that the produce of 8 per cent., on which he has founded his calculations, is the real produce, although, from what has been advanced from time to time, it is more likely to be under than over stated; nor would the inference drawn by 'A Miner,' from the calculations on the standard, be correct. The metal being calculated at 94½. per ton, and the quantity in 40,000 tons of ores equal to 3200 tons, the value would be 300,800½. Now, the price assumed to be paid being 226,000½., there would remain 74,800½. for returning charges, or 1½. 17s. 4d. per ton."

But, against this view of my statement, I must venture, with every deference to your correspondent, to protest—the lode has slipped a little out of its natural position. For example—"Cornubiensis" takes 3200 tons of copper to be all that the smelter gets from 40,000 tons of ore, at 8 per cent., and values the whole at 94½. per ton, making 300,800½.; whereas, instead of 3200 tons, it is, with surplus copper from overweight, at least 3296 tons; besides which, my statement represents only 1848 tons of cake copper, at 94½. per ton, being equal to 173,712½., and 1448 tons of rolled or manufactured copper, at 11d. per lb., or 102½. 13s. 4d. per ton, making 148,661½. 6s. 8d.—the whole together being equal to 322,373½. 6s. 8d., leaving, after deducting the value of the ores for returning charges, not 74,800½., but 96,373½. 6s. 8d., or about 2½. 8s. 2d. per ton of ore, instead of 1½. 17s. 4d. per ton, to cover the whole cost of the copper sold, which turns out to be about 2½. 1s. 6d. per ton of ore; unless, therefore, this latter view of the case can be overthrown, "Cornubiensis" will no doubt be the first to admit that he has underrated the result in the metal market to cover the returning charges on the scale proposed, not less than 10s. 9d. per ton of ore, or 21,573½. sterling on only one year's operations.

Nor is this the only point requiring notice, for "Cornubiensis" states also, "'A Miner' has, I think, not attached that importance to the co-operation of the foreign mining companies which is their due. The same remark will apply to the Irish mines." But, when these observations were made, your correspondent was not aware that he would find on the same day, and in the same columns, in juxtaposition with his own comments (which have led to the discovery of the truth—the great object of such a discussion), that all due respect was paid to the foreign and Irish copper mining companies, having taken care to notice the fact, that the foreign mines had sold nearly 20,000 tons of copper ore, at Swansea, in 1838, and only six of the Irish mines, in three years, ending last June, 60,070 tons, so that these mines alone, without looking to Cornwall, are able to furnish the whole quantity proposed to be smelted annually at the "Free Miners' Establishment."

Thus far, therefore, the utility of discussion is manifest; and one most important movement within the last few days has, no doubt, been quickened by it, as an additional proof of the value of your Journal to the mining world—two spirited and extensive foreign mining companies having already deemed it expedient, as an act of self-preservation, to commence at once, by appointing a committee for carrying either the proposed or a similar object into effect. The requisite inquiries as to all the necessary elements for such an undertaking will now be made; and much good would result by publishing in your Journal and other papers the names of such a committee, as the best assurance that the proceedings will be conducted with strict impartiality, and without regard to private interests. The merits of every situation should be fairly and minutely investigated, so that no site for the erection of so important an establishment may be adopted, without a thorough conviction that the general balance of advantages, particularly with reference to economy in freight and fuel, is most substantially in its favor.

I am, Sir, your's, &c.,

London, Jan. 16.

A MINER.

[We intended this week to have made some remarks on the proposition of "A Miner," but find that the importance of the subject is such as to demand more space and attention than we can devote to our present Number. We shall endeavour next week to bring the subject before our readers, when the suggestions of our correspondent will be found not to have been passed by unheeded.—Ed. M. J.]

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—I have been an attentive peruser of your copper smelting correspondence. "Cornubiensis" is a sensible fellow, and I think I can give him a little light on what ought not to have been dark to him. "Cornubiensis" is bothered by the fact, that a ton in Cornish ore is 21 cwt., and thinks the miner loses the odd cwt. Suppose the ton was raised to 30 cwt., or lowered to 10 cwt., does he think the buyers would offer accordingly, or give the same as now? Suppose a yard was four feet instead of three, would the draper lose the odd foot, or the buyer offer according to the quantity? Depend upon it, no locus-pocus can make the buyers give one penny for the ore more than will buy them, and we only make ourselves ridiculous by attempting to show they buy unfairly, or that the seller can dictate what profit they shall make. If the miner thinks he does not get his share of the produce of what he raises, the only cure for that is increased competition; and the way to induce this is to show a profit to be obtained. In this view the remarks in the *Mining Journal* on the subject are mostly wide of the mark, and preposterously ridiculous—the object being to destroy the smelters' profit, as an inducement to smelting speculation.

"Cornubiensis" is, however, in the right track, in his examination into the smelters' profit. On the 2d inst., in the sale at Redruth, the amount paid was 20,357½. 17s., and the quantity of copper 274½ tons, and the price of copper being 95½. (it is 92½., not 95½.), the amount is 26,077½. 10s.—there is left, as returning charges on 3805 tons of ore, 5719½. 13s., or about 30s. per ton, out of which the smelter is to pay freight, salaries, wages, coals, wear and tear, and make the enormous profit the Editor of the *Mining Journal* assures us he does.

"Cornubiensis" is too sensible not to see this is a poser, and he very cleverly suggests that there must be more copper in the quantity than the estimate. Your correspondents seem to think it likely an establishment for smelting, to protect the miner, would by-and-by merge in a merchant establishment—in other words, seek a profit by buying cheap and selling dear. If I were to take shares, I should make this a *sine qua non*. "A Miner" asserts that the capital could be dispensed with; in one sense this is true, and, I believe, has been done by more than the Birmingham Copper Company, the English Company, and the Crown Copper Company, who have lately given up the trade. Capital is necessary, but, I believe, it can be found, if you can show a profit obtainable. Hitherto your observations have the opposite tendency, but I shall be glad to see "Cornubiensis" following up the subject, and showing whereabouts this great profit is. I have heard of deficient produce, lost by sublimation and the bottoms of furnaces, but this is clearly impossible, as no one can suppose that smelters live by the loss; but, unless we can ascertain how the fact is, it appears to me you show a losing trade, inasmuch as the 30s. returning charges, settled as such by the trade for so many years, are clearly only 30s., by the last sale at Redruth.

Your obedient servant,

January 14.

A. B. C.

[We are glad to receive the communications of correspondents at all times, whether the "preposterously ridiculous" remarks in the *Mining Journal*—

however "wide of the mark"—or the sage observations which may occasionally be found treating on the subject, may call them forth. We like the spirit with which the first three letters of the alphabet has come into the field, and he may "depend upon it no locus-pocus" will prevent us from fairly discussing the question at issue, or giving insertion to the opinions of parties interested. It is a *sine qua non* with us, not to refuse admission to letters because we do not agree with the writers, and, hence, we hope that "A. B. C." will favour us with a second epistle, in which, perhaps, he will inform the uninitiated some of the secrets of the trade.—Ed. M. J.]

ON THE SALES OF LEAD ORES.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—A letter appeared in a recent Number of the *Mining Journal*, calling attention to the fact of the existence of a very great dearth of information respecting the sales of lead ore, and have been sorry to find that you are not in a position to afford the required intelligence. It may be presumptuous in me to approach the subject, not having anything to communicate by which the object of your correspondent can be at all assisted, the purport of my present letter being also to ask for information, on a point rather connected with the influence of geological position on the productiveness for silver of the ores from our lead mines.

I have noticed some of the statements of produce from the lead mines of Cornwall from time to time, viz.—from Old Beerlston, the Tamar or South Hooe, and Redmoor, producing from fifty to eighty ounces in the ton of lead, Cornubian twenty to forty, and some others, which have impressed me with the idea that the lead produced from clay slate contains more silver than that raised from limestone. Being, however, without any particulars of what is the general produce from the latter, and not knowing how to procure it, I am led to ask the favour of your calling the attention of your correspondents to the circumstance, that in any communications on lead ores, they may be disposed to notice it, which might, perhaps, be best done by a tabular statement.

I am, Sir, your's, &c.,

J. B.

London, Jan. 17.

[We have taken some pains to acquire the information desired by our correspondent, and hope, ere many days elapse, to be in a position to furnish such data as may enable him and other of our readers taking an interest in the subject, to arrive at least at an approximation on the several points referred to. We hope our correspondent will lend us his aid. We may have something to say on this subject in our next.—Ed. M. J.]

SULPHUR TRADE MONOPOLY.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Would you, in addition to your kindness in affording my last communication a place in your columns, so far oblige as to permit me to supply an omission into which I had fallen in regard to the British interests affected by the Sicilian sulphur trade? I allude to its influence in depreciating the value of the article of potashes—an important product of the British North American colonies—which the soda produced by Sicilian sulphur and sea salt has operated almost as disadvantageously towards as it has done with respect to kelp. The manufacture of potashes in British North America affords the means of employment to very many of the poorer classes of British emigrants, as well as an indispensable means of clearing those colonies of wood, and freight for a large amount of British shipping. Does it not appear somewhat singular that Sicilian sulphur should, by ruining the kelp trade, not only render emigration, at the public expense, indispensable, but that it should at the same time also deprive the emigrants of a means of subsistence when driven beyond the Atlantic? Other causes, by influencing irreproachably in the market the price of kelp and potashes, might be supposed thus to benefit the one article at the expense of the other; but the operation of sulphur, in regard to these articles, acts simultaneously, in manner and extent, upon both. Neither in this case, can it be argued, that a reduction of the demand for sulphur in Britain, resulting from the price being raised, must prejudice the interests of the Sicilian monopolists, seeing that the monopoly proceeds on the principle of reducing the amount of the article exported from Sicily.

I am, Sir,

NO ENEMY TO FREE TRADE.

January 16.

[We believe a memorial to the Board of Trade, against the monopoly complained of by our correspondent, is, at this moment, in course of signature at the port of Newcastle. The memorial states, and we believe truly, that the monopoly, directly and indirectly, burdens the commercial interests of this country to the extent of upwards of half a million sterling. We cannot doubt but that its importance will command attention, and that the prayer of the memorialists, so deeply interested in the question, will not be disregarded.—Ed. M. J.]

MR. PLAYER'S PATENT.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—At the time Mr. Wrey's advertisements and letters appeared in the public papers, arrangements were pending between Mr. Player and some gentlemen, whom we represent, for the use of his patent in London. In consequence of Mr. Wrey's statements, we were directed by these gentlemen to ascertain how far his statements were well founded, as well as to inquire into the validity of Mr. Player's patent generally.

Had the question continued to be one in which the patent right alone was involved, we should have contented ourselves with communicating the result of our inquiries to the parties interested, but as Mr. Wrey's letter, inserted in your Journal of last week, seems to impugn the character of Mr. Player, we have thought it but an act of common justice to that gentleman, to request your insertion of the documents which, in the prosecution of our inquiry, have come into our hands, and which, we think, will show that Mr. Wrey has laboured under a mistake.

We are, Sir, your very obedient servants,

MANN, BROTHERS, 22, Parliament-street.

T. M. VICKERY, 25, Lincoln's-inn-fields.

CASE.

You are requested to give your opinion on the claim set up by Mr. W. L. Wrey to the priority of the invention patented by Mr. Player, for which purpose we hand you herewith—1. A copy of Mr. Player's specification.—2. Copies of the letters lately published by Mr. Wrey, as also by Mr. Player, on the subject.—3. A drawing of the boiler, constructed from the drawings alluded to in Mr. Wrey's letter (this drawing is furnished by Mr. William Bevan, C.E., who superintended the construction of the boiler).—4. Letters from Mr. William Bevan, and the honorary secretary of the former anthracite association, alluded to in Mr. Wrey's letters.

"Swansea, 3d January, 1840.
"I beg to acknowledge the receipt of your favour of yesterday's date, and to state distinctly, that you never had, with my consent or knowledge, access to the plans and drawings given by Mr. Wrey to the Millbrook Iron Company, for a boiler manufactured at their works, for the old anthracite association in 1837; and also to give you my opinion, that I do not consider there is any similarity between the boiler above referred to, and your patent boiler."
"John Player, Esq., Gwendraeth. (Signed) "W. BEVAN, C.E."

"Swansea, 31st December, 1839.
"My DEAR SIR,—In reply to the inquiries you have made of me, I beg to state that, during the existence of the former anthracite association, I acted as their honorary secretary. From the commencement of the association to its close, you never attended a single meeting at which I was present, nor had you ever access to the book in which the proceedings of the meetings were inserted."
"John Player, Esq. (Signed) "EVAN JAMES"

OPINIONS.

"I am clearly of opinion, that the boiler of Mr. Wrey, as described in the drawing of Mr. Bevan, and sent with this case, has no resemblance to the invention of Mr. Player, and in no respect interferes with his patent."
"Chas. Bompas. (Signed)

"Since writing my former opinion, I have carefully examined a drawing, by Messrs. Bevan and Sons, of a boiler made for Mr. Wrey, and am of opinion, that there is not the most distant similarity between that boiler and Mr. Player's invention. In Mr. Wrey's boiler, there is no provision or chamber for containing anthracite to be heated by the steam and water in such boiler, and it is the placing of such chamber through the boiler, whatever be its construction, which constitutes that part of Mr. Player's invention, and I am of opinion, that the suggested arrangement of boiler by Mr. Wrey, would be the very worst to which Mr. Player's invention could be applied. The object of Mr. Wrey, in making his boiler, appears to have been to put in a large heating surface, and it is similar to an invention patented by Mr. MacCurdy, and purchased by Mr. Chanter. I should imagine, that Mr. Wrey is wholly unacquainted with the nature of Mr. Player's claim to invention; he appears to think that Mr. Player claims to be the first who has used anthracite coal to generate steam, whereas Mr. Player only claims a mode of doing so, and Mr. Wrey, or any other person, might use Mr. Wrey's boiler without interfering with Mr. Player's patent, so long as he did not superadd to such boiler a chamber through it, to contain anthracite, to be heated by the water and steam in the boiler, and heat of the fuel in the furnace, before such anthracite comes on the fire-bars and becomes the acting fuel."
"Lincoln's-inn, Jan. 13. (Signed) "WM. CARPMAEL"

CASE.

SUBMITTED FOR OPINIONS ON THE VALIDITY OF PLAYER'S PATENT.
A copy of Mr. Player's specification is left herewith, that you may peruse the same. You are also requested to say whether the invention, particularly that part which relates to burning anthracite in steam-boiler furnaces is new, and a subject

of a patent, and also whether the invention is so specified as to sustain a patent. In giving your opinion, you are requested to recall to mind all the boilers and furnaces you have met with in your practice, and also those you may have heard of or seen in print; and, amongst others, your attention is called to Nott's furnaces, Arnott's stoves or fire-places, Chanter's, Chanter and Gray's, Booth's and Watt's patents for furnaces.

OPINIONS.

"Extract from Mr. W. Carpmael's opinion on the above case.
"I have carefully considered the specification of Mr. Player's patent, more particularly in respect to that part of the invention which consists of improvements in the construction of steam-boiler furnaces, with a view to burning anthracite. I have examined the different construction of furnaces and fire-places made, and proposed to be made, by Nott, Arnott, Booth, Chanter, Chanter and Gray, and Watt, and I believe the invention of Mr. Player to be new, and a proper subject for a patent; and I am of opinion, that the invention is fully described in the specification; and I am further of opinion, that the patent would be sustained if brought into a court of law."
"(Signed) "WM. CARPMAEL"

"Extract from Sergeant Bompas' opinion on the above case:—
"I am of opinion that neither the patents referred to, namely, Nott's, Booth's, Chanter's, Chanter and Gray, and Watt's, interfere with Mr. Player's patent."
"(Signed) "CHARLES BOMPAS"

"Extract from Mr. J. W. Smith's opinion on the above case—in which case was added—
"Mr. Smith is requested to turn his attention more particularly to Watt's patent, and to see whether it bears any similarity to Player's patent."—(vide Times of 3d December last).
"Neither Watt's fire-place nor Robertson's (which is an improvement on Watt's principle), seem to me in any degree to affect that one of Mr. Player's, in which the feeding chamber passes through the boiler."
"(Signed) "J. W. SMITH."

THE BUDE LIGHT.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—In reply to "A Country Subscriber," for an explanation of the mode adopted for the introduction of the Bude Light into the House of Commons, I beg to state briefly a few particulars. The above new light, named after the inventor's (Mr. Gurney) place of residence in Cornwall, and so denominated by the Trinity House, by way of distinction, or, as Mr. Faraday calls it, "Oxy-oil Lamp," is in all respects similar to the usual Argand Lamp, trimmed with wick and sperm oil, with this exception, that instead of its being supplied wholly with atmospheric air, it is, in respect to the interior of the flame, fed with oxygen gas, which oxygen strikes the nascent carbon and vapour of oil, or carburetted hydrogen, as it is distilled, and produces by their combustion an intense light.

The oxygen is conveyed by a tube proceeding from a gasholder nearly to the top of the wick; when it has the same area as the wick its end is closed, all but a fine aperture, whence issues a jet of gas, under the pressure of a few inches of water. The light is brought into the House by catoptric, and diffused by dioptric principles, so that while it is exceedingly brilliant and effective it is soft and pleasant; the lights are placed out of the House above the roof, and, being insulated with plate glass, ventilation may be carried upwards or downwards, which is an important point.

Of the various media through which the light is to be diffused, that of the crystal octohedron facets, combined with prisms, are considered most likely to answer best. But, as I am trespassing upon your paper, I would refer your correspondent for further interesting particulars on this important invention, to the Minutes of Evidence taken before the Select Committee of the House, also the authorities at the Horse Guards, where it has been applied to illuminate the clock dial "by reflection," or to Messrs. Hancock, Rixon, and Dant, Pall-mall East, who, I believe, are interested in it.

As I feel sure that this light is likely, at no very distant period, to supersede most others now in use, as applied to lighthouses, &c., and, the gas being obtained more readily from manganese than from anything else, it must have a considerable influence upon the future consumption and price, &c., of this ore.

Yours, very truly,

R. E.

[We are obliged to our correspondent for the explanation afforded to "A Country Subscriber." Will he be kind enough, in a further communication, to state what may be the quantity of manganese used to afford a certain power of light, as he speaks of the probable application of this mineral to the production of the "Bude light" having "a considerable influence upon the future consumption and price of this ore?"—Ed. M. J.]

THE IRON TRADE.

Our readers are aware that Mr. Joseph Johnson, iron merchant, of Liverpool, lately read a valuable report on the iron trade, at the Liverpool Polytechnic Society, entitled "Paper on the State and Prospects of the Iron Trade in Scotland and South Wales, in May, 1839," which appeared in the *Mining Review* at the time, and was also published by the author in a separate form. This valuable memoir has been republished in America by Mr. J. M. Sanderson, of Philadelphia, in the form of a pamphlet, a copy of which we have been favoured with, and have much pleasure in transcribing the following letter, addressed by the American publisher to Mr. Johnson:—

Merchants' Hotel, Philadelphia, December 15, 1839.

DEAR SIR,—Accompanied with this you will receive, in pamphlet form, the address which you read before the Polytechnic Society, on the 13th of June. Finding it reported in the London papers, and containing statistics of the rise and progress of the iron business in England, I immediately caused it to be reprinted and laid before the members of Congress and State Legislature. Since then, I have had the pleasure to receive many compliments, not only for the part I have taken, but for the lucid and comprehensive manner in which the subject has been reported by you. At this time the subject to the people of this country is peculiarly interesting. The difficulties under which we are labouring, owing chiefly to the management of our banking institutions, with perhaps the heavy importations of iron, brings increased interest to the objects that are likely to relieve or correct the difficulty; and as we have recently made a successful experiment in smelting iron with anthracite coal, all our capital, our enterprise, and skill, are merging towards the objects that may retain the precious metal within our territory. During the past year our importations of iron exceeded \$2,000,000 dollars, and if we can save that sum by our own skill and industry, we shall so far remove one of the causes which have produced the fluctuations in trade to which we have been subject. With this view, and considering the success of our experiment, we find much in your address to encourage and aid us in the prosecution of our work.

About three months since a furnace, eight feet in the haunches, was constructed at Pottsville, in the nearest anthracite region, and notwithstanding the want of skill, a weak engine, bad ore, for they have been obliged to scrape up every thing that looked like ore, having made no previous preparations, if successful, she has produced from seven to eight tons of metal every twenty-four hours, and continues, as their stock increases, to improve both in quantity and quality. This fact, and the fact that the metal is preferred at a price from three to four dollars per ton over every other description in the market, has drawn the attention of capitalists (for there are still some left), and has given an impetus to the business that looks like accomplishing the object. Alas! there are fifteen furnaces under way, and by the spring it is thought that not less than fifty will be projected for smelting iron with anthracite coal.

[Thus, you will perceive, the interest the subject has excited among us, and how much our feelings are encouraged when the demand is so great, and the fact that it costs but 16 to 18 dollars per ton. When our experience is increased, our machinery more perfect, and our preparations more advanced, it is thought that the cost will not exceed 14 dollars per ton. The price of metal is from 30 to 35 dollars per ton.

But my object is to thank you for your very able report, and to say that it will give me pleasure to communicate at any time the rise and progress of the business in this country. I also send you a map of one of our anthracite regions, which lies about eighty miles north of Philadelphia, and to which there are two canals and a railroad, with a grade of seven feet fall to the mile nearly completed.

To Joseph Johnson, Esq., Liverpool.

Yours, &c.,

J. M. S.

COMMERCE—ITS ORIGIN AND PROGRESS.

The origin of commerce dates from the origin of society. Amongst the barbarous nations of Europe, Asia, and Africa, of which history has preserved notices, as well as amongst the savage tribes of America, and wherever man was found living in a social state, we may discover also, more or less, extensive commercial habits, in proportion as the position of the country, and the condition of the inhabitants, would favour or oppose them. From this reason we need not find fault with writers who seek for the beginnings of commerce, in times anterior to the Deluge. We ourselves believe, that, if Noah has constructed the immense ark, of which the Scriptures speak, the art of building vessels, and navigation, must have previously made vast progress; and as navigation is the best medium of commerce, we must infer that, where we find an advanced state of navigation, commerce must also have attained a considerable development. Commerce and navigation have, so much in common, that it is scarcely possible to treat of their histories separately; and both of them are so intimately connected with, and dependent upon, the progress of arts, that we think it useful to connect in one sketch all that concerns the history of these three branches of human industry.

It would be well, undoubtedly, if we could follow, step by step, the first nations who were given to commercial pursuits; but the history of these times, from being very incomplete, and, above all, very doubtful, does not even enable us to perceive distinctly the political changes in large empires. If mention is made of commercial nations, it is only done incidentally, and only such solitary facts are mentioned with respect to nations that had become powerful enough to occupy a station in this world, and to exercise an influence on the destinies of other nations. Thus it happens, that even with respect to countries which became powerful and flourishing by commerce history does not enable us to find out the beginnings of their commerce,

though, on the other hand, we must suppose that they were, in all countries, nearly of the same nature and description.

For centuries, commerce must have been carried on by exchange from camp to camp, from village to village; and the extent of this commerce of exchange must have entirely depended upon the facility with which it could be carried on, and the wants which were to be satisfied. Among the wants, we have certainly also to comprehend such as were created by habit and opportunity, because it is in the nature of man, that what has become habitual to him, creates further wants, and that he derives fresh habits from whatever he has opportunities of knowing and tasting. It was impossible for the Indian to dispense with the use of our liquors after he had once inebriated himself, and he sacrificed his freedom in order to obtain them with greater facility.

The first nations known cannot have possessed much commerce, because they lived in fertile countries, which left them not many wants. It would appear, therefore, that the commerce of exchange made at first only slow progress, which was again retarded by the precautionary measures taken by some of the ancient legislators; such as the case, for instance, in Chaldea, in Egypt, where the legislature, from a foresight of the evils following in the suit of commerce, had inspired the nations with a fear of the sea, and a hatred against foreigners, who were looked upon as enemies.

Pammetius was the first king of Egypt who endeavored to remove these superstitions from the minds of his subjects. At first he only possessed a small portion of the country, until, through the assistance of the Greeks and Phoenicians, to whom he had opened his sea-ports, he succeeded in rendering himself master of the whole country, and in maintaining himself in its possession. This king applied himself to exciting an inclination for commercial activity in his subjects. His son, Necus, adopted a similar policy. It was by orders of the latter that Phœnician vessels were assembled on the Red Sea, which passed around the Cape of Good Hope, and, after a voyage of three years, returned into the Mediterranean, through the Straits of Hercules. A fact which is the more astonishing, as the construction of vessels could not have attained much perfection at that period. It was not before the time of King Midas, of Phrygia, that anchors were invented; previously large stones, attached to ropes, having served for that purpose. The observation of the flight of birds was the principal means from which navigators judged of their approaching land. Thence it was customary amongst the ancients, for those who hazarded themselves on the open sea, to embark pigeons and ravens, which they set free, in order to direct their course by their flight.

It shows that Necus, to whom history ascribes great talents, would have accelerated the march of civilisation, if he had been able to carry his project of opening and establishing an intercourse between the west, at that time plunged in barbarism, and the east, where some feeble traces of a previous state of advanced civilisation still remained; and if he had succeeded in the execution of a navigable canal, which was to connect the Nile with the Red Sea, Europe would have been enabled to seek for knowledge in India and China. In the latter country we find that, from the most distant times, they cultivated arts which Europe only discovered again a long time after their having been forgotten. Chemistry, for instance, existed in China since the times of the highest antiquity. At all events, it is certain that the priests in Egypt had made discoveries in this science, which, however, they carefully withheld from the knowledge of the nation.

Printing was known in China, India, and Japan; and, from historical documents, it can be proved that, ten centuries before the Christian era, they nursed silk-worms; the manufacturing of glass, embroideries, and tapestries, was also known in a large part of Asia.

These arts, and many more, which were lost, would have been introduced into Europe at the same time with the produce of these countries, if an easy and direct communication had been established between the west and the east; but several centuries were allowed to pass before the canal, begun by Necus, was executed. From the time of this king, the Egyptians, for a considerable period, divided the dominion of the sea with the Phœnicians. A spirit of industry, or rather some lucky accidents, led the Phœnicians to the discovery of the art of making glass, and of dyeing stuffs; with that beautiful purple, called purple of Tyre, of which we have, even until now, vainly endeavored to equal by imitation. It is known that the process for manufacturing glass was, in a short time, brought to a high state of perfection in Egypt and Phœnicia.

The Phœnicians navigated the seas long before the time of Pammetius, who endeavored to render his subjects a commercial nation. They inhabited several towns between India, Syria, and the Mediterranean. They established colonies all along the coasts of that sea into the Straits of Hercules, where, after having found out the British islands, they founded the town of Cadiz. Everything favoured this nation in their commercial speculations; the sea, which was near their habitations; Mount Libanus, which furnished them with wood, whilst sails, cordage, rigging, &c., came in abundance from Egypt; from their vast ports numerous fleets carried the products of their manufactures, and the produce of the east, which arrived through Syria to Greece and further; the whole commerce of all the east and west was thus thrown into their hands, until Greece became civilised, and sent its vessels into the same ports. It is probable that the Phœnicians were the first people which, before the Greeks, possessed a considerable commerce. Homer relates that Ulysses, having landed in their island, found there all the arts of luxury. Nothing, according to this poet, could equal the magnificence of the palace of Antinous. From another passage, in which mention is made of vines that were constantly blossoming, and brought forth fruit at all seasons, it would appear that the Phœnicians already knew the use of hothouses, or of some other means which could supply them, though, on the other hand, it appears strange that the process was not also introduced into Greece.

A thing more certain, however, is, that the art of working metals was far advanced. Copper was in use amongst the oldest nations. It served as the principal substance in compositions, from which they manufactured their bronze or brass, which was a mixture of copper, tin, and zinc. The brass of Corinth, which was a mixture of tin, copper, and gold, was often preferred to gold. From Homer we learn that the arms of the warriors, at the time of the siege of Troy, were generally made of brass. In Egypt, India, China, and amongst all the ancient nations, instruments of copper were found, of which they made use in their temples; the cauldrons of this metal were in high esteem amongst the savages of Acadia, China, Japan, and the island of Cyprus possessed numerous and rich copper mines.

The commerce in tin, which was very considerable, proves the relations of the ancient nations with the north of Europe, and even with India, which, to this day, possesses tin mines. Moses, Ezekiel, and Isaiah, speak of this metal. According to Homer, the warriors covered the heads of their horses with plates of this metal. The ancients preferred the use of tin to that of iron—without which we could not undertake the least work. The Greeks knew that red-hot iron acquired a higher degree of hardness by immersion.

Hercules passes for having first introduced sheep into Greece, but a long time before that period red woollen stuffs were manufactured in China. The Egyptians held these stuffs in horror, and had inflicted large fines upon persons burying their dead, or clothing themselves in these stuffs. In Greece, where the climate was more severe, they knew nothing of this superstition, if we are to call it so, and not a system of prohibition introduced by the priests in favour of their own manufactured goods. It is not known at what period agriculture was introduced into Greece, nor when its inhabitants began to addict themselves to commerce; it is only known that these arts were not introduced in that country until a late period.—L'Office de Publicité.

STEAM-ENGINE BOILERS AND CHIMNEYS.

At the recent meeting of the Geological and Polytechnic Society of the West Riding of Yorkshire, Mr. HARTOP read the following paper "On the Boilers of Steam-Engines and the construction of Engine Chimneys."

On presenting myself before a meeting at Leeds (where the steam-engine is so well understood), with any observations on steam-engine boilers, I feel some apology to be due from me, but I trust that, however trifling the advantage pointed out may be, its application in so wide a field as is here presented will amply repay any attention given to it. I need not go further back than the introduction of the wagon boiler by the late Mr. Watt, which, from its excellent arrangement, was the standard boiler for so many years, during which time a very general opinion prevailed amongst practical men that, whenever the length of the boiler exceeded four times that of its grate (say twenty-five feet), such additional length was useless, as to the quantity of steam produced, although a considerable degree of heat always passed away up the chimney. The cause of this I conceive to be that the heated air in these flues passes last, and therefore when at its coolest, through the side flues, by which it is brought in contact with water near the surface in the boiler, and therefore at that point where it is the hottest; in consequence of which the boiler, if made very long, might re-impart a portion of its heat to the air in the flues before it passed to the chimney. This point will, however, be better defined on our considering the boiler now in general use in Cornwall. Before doing so, I may, however, be excused for making a few observations on a boiler, which from its simplicity and strength, is at present becoming a very fashionable one, if I may be allowed the expression—I mean the cylindrical boiler with semi-spherical ends. This, there can be no doubt, is a boiler of great strength, and I believe it was introduced at a time when engines were in use with steam at 200 or 300 lbs. pressure per square inch. This dangerous pressure, I am happy to inform the public, is in modern engines not required, the highest now in use being that of 100 lbs. per square inch, at about 60 lbs. per square inch; the boilers for which are so constructed as to render danger to the public very improbable. In the expansive engines of Cornwall, the steam used rarely exceeds 50 lbs. per square inch, and in the high-pressure engines of the best makers the steam in use is little more than 30 lbs. per square inch, from which it will be seen that great strength in a boiler is not now so requisite as formerly, and particularly when it is consi-

dered that the same accidents will happen to the strongest as well as to the weakest boilers, from similar causes, and that when they happen to a strong one, the explosion is the more terrific in the direct proportion as the boiler is the stronger. We should therefore avoid the cause of these dreadful accidents rather than strengthen the boilers. Now there is one very great disadvantage in the cylindrical boilers, viz., that the incrustation will all collect in that portion of the boiler which is nearest the fire, and being a non-conductor of heat, will expose that portion of the boiler which lies between the fire and such incrustation to be burnt away. The argument in favour of this boiler, derived "from the ease with which it may be repaired," is therefore more than done away with by its so often standing in need of that repair, which in well-constructed boilers will not be required for the first twelve or fourteen years. The next and last boiler I shall at present occupy your time in considering, is that of the Cornish boiler. It consists of an outer cylindrical case, having an inner tube passing through its whole length, in one end of which the fire-bar or grate is placed, by which arrangement the heated air and flame is made to pass nearest the surface of the water in the boiler, where both air and water are the hottest; the former then returns through the side flues, and descending under the grate, passes under the boiler into, where both the heated air and water are at their coolest, so that in a boiler of sufficient length the whole heat given out by the fuel may, under this arrangement of the flues, be imparted to the water in the boiler, and it is consequently found in Cornwall that they may be used to advantage to the extent of fifty feet in length. I am induced to appear before you on this subject in consequence of my not having found these points hinted at either in the very excellent practical work on steam-engine boilers, by Mr. Armstrong, of Manchester, or elsewhere. I may here also mention the very great importance it is to the owners of steam-engines, that the iron selected for these boilers should be of a proper quality for that purpose, for I have known many instances of the bottom of boilers being entirely worn out in eighteen months, instead of lasting nearly as many years, the kind of boilers in both instances being in every respect the same, from which circumstance there can be no doubt that it is on the real stamina of the iron from which the boilers are made that their goodness or good-for-nothingness depends. Connected with this subject is that of the chimney, which is very often carried to the height of 160 and 200 feet, and consequently made so small in the internal flue at the top as to cause the smoke to pass off with some difficulty. Having about eighteen years ago built one 110 feet high with its internal flue wider at the top than at the bottom, it was found in practice to answer so well, that on applying fourteen puddling and other furnaces to it, the draft up to that point seemed rather to be improved with each additional furnace than impeded. I now find the practice becoming a general one in Scotland and Lancashire, which I attribute to my having mentioned the circumstance from time to time to my friends; and I do not hesitate to say, that in good situations, 80 feet will be found an ample height for the largest engines, and 100 feet in situations less favourable.

PURCHASES OF COPPER ORES AT REDRUTH.

Purchaser.	Mine.	Tons.	Total.	Price.	(Each Parcel.)	Total Amount.
				£ s. d.	£ s. d.	£ s. d.
MINES ROYAL	Carnbrea	316	316	3 12 6	...	114 3 6
1. CO.						
2. VIVIAN AND SONS.	Carnbrea	86		2 4 6	195 10 0	
	Wheal Friendship	36		3 10 6	126 18 0	
	.....	71		2 13 0	186 8 0	
	.....	58		5 10 0	319 0 0	
	Fowey Consols.	75		7 3 6	538 2 6	
	Marazion Mines.	35		4 6 6	135 14 0	
	.....	14		7 4 6	101 8 0	
	Providence Mines	63		7 12 0	494 0 0	
	.....	254		7 12 0	292 1 3	
	Wheal Busy	47		3 14 0	173 18 0	
	.....	29		1 10 6	51 2 0	
	.....	11		3 16 6	42 1 6	
	Trefoil	35		13 8 0	462 8 0	
	Wheal Kitty.	25		7 5 0	181 5 0	
3. FREEMAN & CO.	Carnbrea	26	616	5 12 6	146 5 0	3251 12 8
	Wheal Friendship	79		4 16 6	351 8 6	
	.....	72		6 7 0	457 4 0	
	.....	20		4 13 6	93 10 0	
	Fowey Consols.	95		6 8 0	584 8 0	
	Wheal Julia	67		8 8 6	564 9 6	
	.....	92		5 0 6	48 19 10	
	.....	34		8 18 6	263 9 0	
	Trefoil	42		5 16 0	243 12 0	
4. GREENFELL AND CO.	Wheal Friendship	68	444	5 5 0	350 15 0	2922 17 10
	Wheal Julia	92		5 0 6	48 19 10	
	Providence Mines	264		7 12 6	292 1 3	
	Wheal Treasury	35		2 10 6	88 7 6	
	.....	26		2 10 6	65 13 0	
5. CROWE COPPER CO.	Tresavean. ....	...	1604	9 12 6	...	758 18 7
6. SING, WILLIAMS, & CO.	Carnbrea	36	42	5 12 6	146 5 0	494 5 0
	.....	36		3 10 6	126 18 0	
	.....	62		8 16 0	345 12 0	
	.....	214		11 13 6	251 0 3	
	.....	41		9 9 6	380 9 6	
	.....	36		8 19 6	328 2 0	
	Fowey Consols.	70		5 16 6	397 8 0	
	Marazion Mines.	29		1 11 6	45 13 6	
	Wheal Julia	92		5 0 6	48 19 10	
	Relistian	28		5 4 6	146 6 0	
	.....	13		5 4 0	67 12 0	
	Wheal Treasury	23		8 0 6	75 12 6	
7. WILLIAMS AND CO.	Carnbrea	86	3974	4 8 0	355 4 0	3249 13 7
	.....	26		5 12 6	146 5 0	
	.....	314		3 12 6	114 8 3	
	.....	214		11 13 6	251 0 3	
	.....	35		4 10 6	138 7 6	
	Fowey Consols.	109		5 0 0	507 0 0	
	Tresavean.	42		9 12 6	494 8 0	
	.....	73		5 16 6	436 17 6	
	.....	79		7 19 6	554 15 0	
	Wheal Julia	92		5 0 6	48 19 10	
	Wheal Speed	23		11 1 0	234 8 0	
8. VIGORS AND CO.	Wheal Friendship	29	516	4 13 6	98 10 0	3254 9 10
	Wheal Buller	82		5 1 0	442 16 0	
	.....	58		6 1 6	295 17 0	
	.....	41		13 8 6	628 6 6	
	.....	7		4 17 6	34 2 6	
	Marazion Mines	35		6 7 0	209 12 0	
	.....	82		7 15 0	244 16 0	
	.....	14		7 4 6	101 8 0	
	Relistian	29		5 4 6	146 6 0	
	.....	33		5 16 0	191 8 0	
	Wheal Speed	79	427	4 14 0	371 6 0	3559 2 0
			2695			15964 18 7

JOINT STOCK BANKS

No. of Shares.	NAME OF COMPANY.	Amount of Shares.	Amount Paid.	Dividend per Share.	Market Price.
25,000	Agric. & Com. of Ire.	25	10	—	—
5,000	Australasia	40	40	59	8
1,500,000	Bank of Scotland	100	83	178	6
10,000	Birmingham Bank	50	10	252	10
500,000	British Linen Co.	100	160	—	8
20,000	British North Amer.	50	30	27	6
50,000	Commercial	5	5	4	—
20,000	Colonial	100	25	36	3
5,000	Devon and Cornwall	100	25	43	8
3,000	Equitable Loan Co.	—	9	10	—
1,000,000	Glasgow Union	250	50	65	7
19,000	Gloucestershire	50	10	23	10
6,000	Hampshire	30	5	—	10
10,000	Hibernian	100	25	21	4
4,000	Ionian State	25	5	7	—
3,000	Devon & Cor. Br. Co.	—	30	36	—
20,000	London & Westminster	20	20	22	1
5,000	Lancaster	100	20	—	10
25,000	Liverpool	100	12	22	10
60,000	London & Joint Stock Co.	50	10	12	5
50,000	Manch. & Liver. Dis.	10	19	74	10
20,000	Manchester	100	25	27	7
25,000	Momn. & Glasgor.	20	10	16	13

20,000 North & South Wales	10	5	10	6	—
20,000 Nat. Bank of Ireland	50	17	16	16	—
20,000 Nat. Provincial, Engl.	30	35	34	5	—
10,000 Ditto	10	10	10	10	Jan
80,000 Nor. & Cnt. B. of Engl.	10	10	5	5	—
10,000 North Wilts.	25	5	10	7	—
20,000 Prov. Bk. of Ireland	100	25	45	8	July
4,000 Ditto New	10	10	18	8	—
2,000,000 Royal of Scotland	100	109	165	6	—
7,000 South African	—	—	5	—	—
20,000 S. of Ireland, Cork	25	5	5	—	—
4,000,000 Western of Scotland	206	40	—	5	July
20,000 W. of Engl. & S.W. Dis	20	124	12	5	—
20,000 Wilts and Dorset	15	74	74	5	—
GAS LIGHT AND COKE COMPANIES					
10,000 Alliance	10	5	—	—	—
2,500 Bath	20	16	22	1	Sept
600 Bradford	25	25	—	10	—
5,000 British	40	18	21	13	May
5,000 Do. Provincial	20	19	25	12	Nov
928 Birmingham	77	77	93	84	July
2,400 Birm. & Staffordshire	50	50	73	4	Sept
600 Brentford	50	50	18	4	Apr
4,250 Bristol	20	20	56	2	Feb
1,500 Brighton	20	20	20	20	Nov
750 Do. New	20	18	94	34	—
2,473 Brighton, General	20	20	94	43	Nov
263 Carlisle	25	—	—	—	—

7,000	Continental Consolidat.	50	62	10	64	July
7,000	Do. New	50	10	24	—	—
240	Chenabury	50	50	55	6	Jan.
700	Chemsford	50	50	42	4	Dec.
500	Cheltenham	50	50	73	8	Oct.
1,000	Do. London	100	100	198	10	Sept.
1,000	Do. New	100	25	24	10	Dec.
800	Conventry	25	25	—	—	—
200	Derby	50	50	50	—	—
180	Dover	50	50	—	—	—
600	Dudley	50	20	17	5	—
4,500	Edinburgh Coal Gas	25	25	—	—	—
	Edinburgh and Alloa	—	14	—	—	—
240	Exeter	50	50	—	—	—
4,000	Equitable	50	50	29	8	June
0,000	Expen	20	15	15	—	Aug.
4,500	Glasgow	25	25	54	10	—
20,089	Greenwich Railw. Gas	—	—	—	—	—

0,000 Imperial.	50	50	54	5	—
5,000 Do. Bonds.	100	100	100	4	—
1,200 Ipswich	10	10	10	—	—
800 Isle of Thanet	25	20	18	5	Aug.
2,350 Independent.	30	30	50	6	Oct.
240 Leicester	50	50	—	—	—
750 Leith Coal Gas.	20	20	—	—	—
800 Liverpool	242	242	360	17	—
Do. N. Gas and Coke	100	100	97	—	—
Do. (New Do.)	—	60	—	—	—
200 Maidstone.	50	50	100	10	Feb.
900 Phoenix	50	50	31	4	June
579 Port of Harb.	—	53	—	—	—
300 Poplar	50	50	—	—	—
004 Reading	—	50	—	—	—

490 Rochdale	100	15	60	0	Sept.
4,000 South Metropolitan	30	22	19	4	July
4,600 Sheffield	16½	Dec.
4,600 Shrewsbury	10	Dec.
120 Swansea	50	56	Dec.
2,390 United General	50	46	36	5	Jan.
240 Warwick	50	50	50	5	Jan.
400 Wakefield	25	25	229	14	Jan.
750 Warrington	20	20	20	1	Oct.
6,000 Westminster Chartered	50	50	574	3	Dec.
500 Ditto New	50	10	11	129	Dec.

890 Worthing		50	50	..	5	Aug.
890 Yarmouth
DOCKS.						
10,065 Commercial	100	100	66	3	July	
East and West India Stock	160	160	1044	..	Jan.	
1,038 East Country	100	100	10	
3,531 1/2 London. Stk	66	3	Dec.	
Ditto Bonds	106	4	..	
2,209 Bristol	147	147	74	3	Dec.	
68,324 Ditto Notes	113	5	Nov.	
570 Folkestone Harbour	30	30	
15,000 Ditto Bonds	
11,000 Grand Conrail Stocks	30	1	5	
262,732 St. Katharine. Stock	100	100	167	..	Jan.	
90,000 Ditto Bonds	1014	4	Oct.	

2,000	D. Bonds for 10 years	20	3	11	4	Oct.
2,500	Deptford Pier	20	3	11	—	—
	Southampton	50	3	24	—	—

BRIDGES.						
600	Hammersmith	50	50	22	1	Jan.
231	Southwark w. new sub.	534	534	23	12	Dec.
700	D. New of 7 1/2 per cent.	30	30	14	—	—
848	Vauxhall	704	704	23	19	Dec.
600	Waterloo	100	100	—	—	—
900	D. old Annuities of 8s.	60	60	21	22	Feb.
900	D. new do. of 7 1/2	40	40	18	19	Feb.
900	Ditto Bonds	—	—	120	3	Feb.

WATER WORKS.						
10	Birmingham	25	25	20	10	—
21	Colchester	100	100	—	—	—
21	East London	100	100	162	7	Jan.
100	Glasgow	50	50	—	—	—
100	Grand Junction	404	411	67	24	Jan.

Edinburgh Joint Stock	25	25
00 Kent	100	100	44	2	Jan.
72 Liverpool Roodle ..	220	220	327	10	Jan.
00 New River Lond. Bridge	60	24	Oct.
00 Water Annuities ..	100	..	54	24	Mar.
00 Manchester & Safford ..	50	50
00 Portsea Island	50	50	21	1	..
00 Portsmouth & Farlington	50	50	8	10	..
00 Kamagate	100	100	104	5	Oct.
00 Vauxhall, late So. Lond.	653	653	99	4	Dec.
00 West Middlesex	100	100	35	114	Oct.
00 York Building Co. L. P.	100	100

ROADS.					
00 Archw. and Kent Tn. ..	30	30	..	1	1 & 1
00 Barking	100	100	224	1	1 & 1
00 Commercial	100	100	73	3	1 & 1
00 Do. East India Dock Br.	100	100	3	3	1 & 1
00 Great Dover Str.	70	70	..	14	1 & 1
00 Highgate Archway	304	304	2
00 New North Ed. Stock	100	100

LITERARY INSTITUTIONS.					
00 Adelaide Gal. of Science	20	20
00 London, W. Brouse Tick.	75	75	18
00 London University	100	100	8
00 Russell	25	25	7
00 King's College	100	100	144

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